
**PROFILE OF THE HEALTH SERVICES SYSTEM OF
COSTA RICA**

(1st edition, 2 February 1999)
(2nd edition, 27 May 2002)*

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EXECUTIVE SUMMARY

Costa Rica is a unitary state with a land area of 51,000 km² and a population of nearly 4 million. The country is divided into seven provinces, 81 cantons, and 459 districts. According to the July 2000 census, 59% of the country's 3,810,179 inhabitants reside in urban areas. The indigenous population numbers 63,876 (1.7% of the total population), divided among eight ethnic groups.¹

The government is made up of the executive, legislative, and judicial branches, the first two are elected every four years. In recent decades, elected governments have alternated between the two majority parties.

Between 1992 and 1999, the economy grew 5.8% on average, but growth sharply dropped to 1.9% in 1998-1999 and then to 1.5% in 2000, with no signs of a recovery in the short term.

Some 5% of the population is illiterate, but the figure ranges from 1% to 15.4% in the different cantons. In 1999, 20.6% of households were poor and 6.7% indigent, according to the National Institute for Statistics and Censuses (INEC). Costa Rica's Human Development Index has continued to rise, from 0.745 in 1975 to 0.821 in 1999, placing it 41st among the 162 countries ranked worldwide and fifth in the Region. Costa Rica's gender-related development index in 1999 was 0.795, ranked 42nd, while its ranking per capita GDP was 60th.

The health sector in Costa Rica is made up of the Ministry of Health (MH), the Costa Rican Social Security Fund (CCSS), the National Insurance Institute (INS), the Costa Rican Institute of Water Supply and Sewerage Systems (AyA), the University of Costa Rica, and the municipalities. The MH exercises the steering role for the sector. During the 1990s, the MH transferred health prevention and promotion programs to the CCSS. This enabled the CCSS to adapt its health care model, integrating promotion and prevention activities with those for treatment and rehabilitation. The CCSS is the only public entity that provides maternity and health insurance for the entire population of the country, and to this end it has a network of services at the first, second, and third levels of care. The first level provides five comprehensive care programs through a network of 93 health areas with 783 Basic Comprehensive Health Care Teams (EBAIS) and some peripheral and deconcentrated clinics. The second level provides emergency services, diagnostic support, specialized outpatient consultations, and basic surgical procedures through a network of health centers and peripheral and regional hospitals. The third level provides hospitalization and high-tech medical and surgical services in three national general hospitals and five specialized hospitals. Ninety percent of the population belongs to this health insurance system and the remaining 10% can use it if necessary for emergency services. Financing for public health insurance comes from

three sources: employers contribute 9.25% of the wages paid, workers contribute 5.50% of their wages, and the State contributes 0.25% of the total national wages (in all, the financing amounts to 15% of a worker's salary). Actuarial studies show that the health insurance system is financially sustainable for at least 10 years, but the CCSS has begun to take steps to improve its collection system by developing a new model for allocating resources through management commitments with suppliers that require performance-based accountability. In 2000, the national averages for prenatal care and delivery by skilled personnel were 89% and 97%, respectively. Health care coverage for children under 1 year was 93%, and the infant mortality rate was 10.2 per 1,000 births. In 1988, the CCSS began to purchase first-level services from external providers called health cooperatives. The results have been considered positive: 400,000 inhabitants (11% of the population) are now covered by these or by similar types of providers. In addition, due to higher demand, the CCSS began to purchase some specialized services as well.

Within the framework of State reform, health sector reform began in 1994 with a four-part agenda: a steering role for the Ministry of Health and its strengthening; institutional strengthening of the CCSS; a new system for the reallocation of financial resources; and adaptation of the health care model. To promote the reform process, the country used loans of \$4.3 million from the Inter-American Development Bank (IDB) and \$22 million from the World Bank, as well as technical cooperation from PAHO/WHO. These projects and their external financing concluded in 2001. Evaluation of their results shows progress with respect to service coverage and access, mechanisms for allocating financial resources and provider payment systems (fees for first-level services and hospital production units for hospital services). However, the results also show that there is work to be done on the reform of the health system. Steering role functions need to be further strengthened, and it is necessary to improve the performance of certain essential public health functions, the management of services, the quality of care, and equity in the allocation of resources. This has prompted the health sector to propose new financing that will permit a continuation of the reforms currently under way.

1. CONTEXT

Political Context: Costa Rica is a unitary state with an area of 51,000 km² and a population of nearly 4 million. The country is divided into seven provinces, 81 cantons, and 459 districts. The government is made up of the executive, legislative, and judicial branches, the first two of which are elected every four years. In recent decades, elected governments have alternated between the two majority parties: the National Liberation Party (PLN), and the Social Christian Unity Party (PUSC). There has also been a growing trend toward voter abstention, which reached 30% in 1998 and 31% and 39% in the first and second rounds of the 2002 elections. The elections of February 2002 were a milestone in the country's political history, because a third political party attracted a large number of votes. The election went for the first time to a second electoral round, and the National Assembly during the next administration will be made up of lawmakers from four parties. The political, administrative, and fiscal system is centralized. Budgets are determined centrally and have little flexibility.² Municipal resources represent only 2% of total public spending. However, in July 2001 the government agreed to reform Article 170 of the Constitution in support of a law to transfer responsibilities to municipalities. The idea was to gradually increase their resources up to 10% of public spending for education, transportation, housing, and health projects.³ The policy management instrument is the National Development Plan (NDP) for 1998-2002, and the Ministry of National Planning and Economic Policy is the executive branch entity in charge of monitoring its execution. Social development policies are part of the NDP and are implemented through sectoral programs prepared by the different ministries. Results are evaluated quarterly through the National Evaluation System (NES), which the government uses to assess public sector performance.⁴ Other auxiliary agencies that control public management include the Office of the Comptroller of the Republic; an ombudsman's office called the People's Defender, which monitors the quality of public services, including those pertaining to health; and the IV Constitutional Court, which has the authority to revoke legislative decisions considered unconstitutional.

The objective of the National Health Policy for 1998-2002 and the National Health Plan for 1999-2004 is sectoral management, leadership, and coordination.⁵

The social and political factors that can adversely affect the health situation are immigration, growing unemployment and the informal market, stagnation of the economy, the number of poor households, and environmental pollution.

Economic Context: The economy grew at 5.8% on average between 1992 and 1999, but then declined sharply to 1.9% over the period 1998-1999 and then to 1.5% in 2000. No signs of recovery are seen for the short term.⁶ The decline in economic growth in the United States,

reduced exports of manufactured goods, and the drop in international coffee and banana prices contributed to slower economic growth. The share of GDP by economic sector in 2000 was 24.2% for manufacturing; 17.9% for trade, restaurants, and hotels; 10.7% for agriculture, forestry, and fishing; 10.3% for community and social services; 9.4% for transportation, storage, and communications; 5% for real estate activities; and 3.5% for construction.⁷ International technical cooperation fell by 17.6% between 1990-1999 and nonreimbursable cooperation by 12.6%. The Inter-American Development Bank increased its share of reimbursable cooperation to the country from 35.7% to 54.4% over the same period, while USAID and Japan reduced their credits.⁸ The country's social development index puts it on a list of countries that are not prioritized to receive external financing and international cooperation.

Economic Indicators, 1993-2000

INDICATOR	Year							
	1993	1994	1995	1996	1997	1998	1999	2000
Per capita GDP in constant prices, in US\$ (1)	2,893.6	3,093.1	3,345.5	3,296.1	3,485.0	3,740.1	4,096.4	4,044.5
Economically active population, in thousands (2)	1,143,324	1,187,005	1,231,572	1,220,914	1,301,625	1,376,540	1,383,452	1,390,560
Total public expenditure as a percentage of GDP	37.2	42.7	40.0	40.1	39.6	38.7	37.5	
Public social expenditure as a percentage of GDP (3)	15.8	16.6	15.4	16.8	17.1	17.1	16.5	17.4
Annual inflation rate (%) (4)	9.0	19.0	22.6	13.9	11.2	12.3	10.1	10.2

Sources: (1) Central bank; (2) INEC; (3) MIDEPLAN; (4) State of the Nation report.

Demographic and Epidemiological Context: Life expectancy at birth increased slightly over the past decade (from 76.7 years in 1990 to 77.5 years in 2000). The five-year difference between men and women stayed the same (74.8 years and 80.2 years, respectively). The total fertility rate declined from 5.1 to 2.5 per 1,000 population between 1970 and 2000, and the birth rate dropped from 25.4 births per 1,000 population in 1992 to 22.4 in 2000. However, annual population growth rose from 2.3% during 1973-1984 to 2.9% during 1984-2000. The increase is attributed mainly to inflows of Nicaraguan migrants, whose share of the population tripled from 2.9 per 1,000 population during 1975-1980 to 9.1 during 1990-1995. The dependency ratio declined from 1.0 to 0.6 between 1970-1999.^{9 10 11}

Mortality data are reliable and provided by the civil registry system and the National Institute for Statistics and Censuses (INEC). In 1999, a physician certified 83.4% of the 15,052 deaths. Of this total, 58.1% were people 65 or older and 57.8% were men. The underreporting of mortality declined from 2.1% to 1% between the years 1995 and 2000, and the percentage of deaths from ill-

defined causes also dropped from 2.1% to 0.7% over the same period. The total death rate during 1995-1999 was 3.9 per 1,000 population (4.4 for men and 3.3 for women). That rate varied across the country's provinces from 6.4 to 5.5 per 1,000 population. The five leading causes of death over 1995-1999 were cardiovascular diseases (30%); neoplasms (21%); injuries (12%); chronic respiratory infections (8%); and perinatal disorders, congenital diseases, and diseases associated with pregnancy and puerperium (6%). Taken together, the leading causes account for 77% of total deaths.¹²

Selected Demographic Indicators, 1993-1999

	Years							
	1993	1994	1995	1996	1997	1998	1999	2000
Crude birth rate per 1,000 pop.	24.9	24.6	24.0	23.3	23.0	23.6	23.3	22.4
Total fertility rate per 1,000 pop.	3.0	2.8	2.8	2.7	2.7	2.9	2.9	2.5
Crude mortality rate per 1,000 pop.	3.9	4.0	4.2	4.1	4.0	4.1	4.2	4.2
Maternal mortality rate per 100,000 pop.	N/A	N/A	20.2	N/A	N/A	23.4	24.2	35.8
Infant mortality rate per 1,000 pop.	13.7	13.0	13.2	11.8	14.2	12.6	11.8	10.2

Source: INEC, *Estadísticas Vitales*.

Although deaths from cardiovascular diseases and tumors have increased in percentage terms and account for half of total deaths, their combined rate actually declined from 537 per 100,000 population during 1970-1974 to 377 during 1985-1998. The leading causes of death in 1999 were diseases of the circulatory system, with a rate of 1.28 per 1,000 population, followed by tumors (0.87) and external causes (0.46). This latter cause of death generates the highest proportion of potential years of life lost. Mortality from external causes in men is three times higher than in women (26.4% versus 8.8%), due to a higher incidence of traffic accidents among males. Mortality from communicable diseases declined significantly between 1970 and 1999 (from 31.7% to 6.7%). Acute respiratory infections, diarrheal diseases, and HIV infection/AIDS accounted for 80% of these deaths.

Infant mortality has fallen substantially over the past 30 years (from 61.5 per 1,000 live births in 1970 to 12.6 in 1998). With the launching of the National Plan for the Prevention of Infant Mortality in 1999, the rate was reduced even more, from 11.8 per 1,000 live births in 1999 to 10.2 in 2000.¹³ In 2000, neonatal mortality and post-neonatal mortality were 7.1 and 3.1 per 1,000 population, respectively, with disorders during the perinatal period representing the leading cause of death in children (48.4%), followed by congenital malformations (32.2%), diseases of the respiratory tract (8.8%) and infectious and parasitic diseases (4%).

Maternal mortality varied little over the last five-year period: in 1995, it was 20.2 per 100,000 population; during the three-year period from 1996-98, it was 23.5; and in 1999, it was 19.0. The leading causes were complications of abortion and eclampsia. Of the 15 deaths in 1999, 85% were described as preventable. In 2000, most deaths were examined through the Maternal Mortality Evaluation System.

Despite the national effort to improve the health care coverage and access, some communicable diseases reemerged during 1996-2000, including dengue, malaria, leptospirosis, and tuberculosis. Diarrheal diseases and respiratory infections also persisted, and accidents, violence, pregnancy in adolescents, HIV/AIDS, and suicide were on the rise.¹⁴ Dengue recurred in 1993, producing epidemics in three of the country's seven provinces between 1994 and 1999. The first cases of hemorrhagic dengue fever were reported in 1995, and in 2000 there were 77 patients reported with classical dengue with hemorrhagic symptoms, four with hemorrhagic dengue fever, and two deaths. In 1999 and 2000, there were outbreaks of hospital infections, whooping cough, rubella, and food poisoning. The factors behind this epidemiological situation include the weakening of preventive programs during their transfer from the Ministry of Health (MH) to the Costa Rican Social Security Fund (CCSS); the fragile health surveillance system; the emphasis on curative and individual approaches to care; insufficient community participation in health; and the impact of migration. Other risks to health include the poor quality of water for human consumption, inadequate treatment of wastewater (only 4% of wastewater is treated), poor road infrastructure, and risks associated with gender and lifestyle.

Social Context: The July 2000 census reported 3,810,179 inhabitants in Costa Rica, 59% who reside in urban areas. The indigenous population is 63,876, which represents 1.7% of the total population and is divided among eight ethnic groups.¹⁵ The percentage of the population that is illiterate is 5%, but that figure varies from 1% to 15.4% among the cantons. In 1999, 20.6% of households were described by the INEC as poor and 6.7% as indigent, or 23.7% and 7.5%, respectively, of the Costa Rican population. There are regions in the country, such as Brunca and Chorotega, where the respective proportions of people living in poverty are 34.1% and 35.5%.^{16 17} The ratio between the income of the highest 20% and lowest 20% of the population held relatively stable over the past decade and in 1999 was 13. The open unemployment rate showed little variation between 1988 and 1998 (5.5% and 5.6%, respectively). Nevertheless, the household survey conducted by INEC reported an increase up to 6% in 1999, and a growing underutilization of the work force. Costa Rica's human development index has maintained an upward trend, from 0.745 in 1975 to 0.821 in 1999, placing it 41st among the 162 countries ranked worldwide and fifth

in the Region. Costa Rica's gender-related development index in 1999 was 0.795, ranking it 42nd, while its ranking based on per capita GDP was 60th.

2. HEALTH SERVICES SYSTEM

General Organization: The public sector of the health services system is made up of the Costa Rican Social Security Fund (CCSS), which provides health insurance (including comprehensive health care and financial and social benefits). By the National Insurance Institute (INS), which covers occupational and automobile accidents. By the Costa Rican Institute of Water Supply and Sewerage Systems (AyA), which regulates the supply of water for human consumption and wastewater disposal. Finally, the Ministry of Health (MH), which monitors the performance of essential public health functions and exercises the steering role in the sector. The MH is part of the Executive Branch, while the CCSS, the INS, and the AyA are deconcentrated autonomous entities with their own statutes and resources. Each of the aforementioned are run by a Board of Directors and an Executive President. Under the General Health Law and an Executive Decree of 1989, the University of Costa Rica and the municipal governments also are part of the national health system.¹⁸ From the standpoint of the state budget, the Ministry of Finance also groups decentralized agencies with specific functions into the health sector--for example, the Institute for Research on Nutrition and Health (INCIENSA), the National Center for the Prevention of Drug Abuse (CENADRO), and the Institute on Alcoholism and Drug Dependence (IAFA).¹⁹

Under the General Health Law and the Public Administration Law, the MH handles coordination of the sector. There is also a National Health Sector Council, created in 1998 by presidential decree, which decides on sectoral actions to address public health problems, such as the campaigns against tuberculosis and infant mortality, evaluation of hospitals, and research on human subjects.^{20 21}

Under the separation of functions promoted by health sector reform, the MH should only perform sectoral steering role functions. However, in practice, since the transfer of care programs to the CCSS has not been finalized, the MH continues to be in charge of education and nutrition programs for poor children under 7 years of age (CEN-CENCINAI), as well as vector control. In order to exercise the sectoral steering role, in 1998 the MH began to change its structure and cut back its personnel; the new structure consists of a ministerial office (Minister and Vice Minister), a general bureau, six central offices, nine health regions, and 80 health areas.²²

By constitutional mandate, the CCSS is the institution that must provide public services that cover health insurance and maternity care for the entire population. Planning for these services is carried out through six central offices, seven health regions, and 93 health areas, while their delivery is the

responsibility of facilities organized into three levels of care, linked through patient referral mechanisms. At the first level, the CCSS organizes access through the aforementioned health areas, which include health posts, health centers and clinics that offer services through five comprehensive care programs for children, adolescents, women, adults, and the elderly. In most cases, these services are provided through Basic Comprehensive Health Care Teams (EBAIS), each of which serves an average of 3,500 people.²³ In 1997, some health areas began to sign annual management commitments with the central level that set outcome-based goals for the five aforementioned care programs. To date, all the health areas have signed these commitments. In addition, in 1988 the CCSS launched a system to purchase basic first level services from non-public entities called health cooperatives. The results were positive in terms of coverage, quality, and cost. In 2001, four cooperatives and a foundation at the University of Costa Rica were already contracted, serving a total population of 400,000. The second level of care provides specialized consultations, hospitalization, and medical and surgical treatment for the four basic specialties. These services are provided by 10 health centers, as well as 13 peripheral and seven regional hospitals. The third level provides specialized care, as well as complex medical and surgical treatment through three general and five specialized national hospitals (for women, children, geriatric care, psychiatry, and rehabilitation). The supply of some hospital services such as radiation therapy, ophthalmology, and pathological anatomy is limited, which means that the CCSS contracts out services to hospitals or private enterprises. This effort is still not enough, however, and has not resolved the problem of the waiting list for surgical hospitalization, which at the start of 2001 numbered nearly 14,000 patients. On several occasions the quality of care and transparency in the contracting and pricing of private services have been questioned by the general public, the People's Defender, state regulatory agencies, and the Office of the Comptroller of the Republic.²⁴ Although the General Health Law states that health is a public good and the responsibility of the State and that all people have the right to health services, the CCSS is aware that only 80% of the population is insured either through the compulsory or voluntary system, or as pensioners or their dependents. Of the remaining 20%, 10% are insured through State subsidies, given that this population group is under the poverty line. The other 10% can request public services when necessary and pay for them directly.²⁵

There is a growing private health services sector that has its own network of facilities. Household surveys report that 30% of the population uses these services at least once a year.²⁶ Investment in the private health sector has been stimulated by direct demand for these services by users, contracting out by public institutions such as the CCSS and the INS, the insufficient supply of

public services, and the appearance of private insurance enterprises under the prepaid medicine modality. One indirect indicator of the expansion of the private sector is the growing number of health professionals who work in it. These numbers increased from 9.9% at the beginning of the 1990s to 24% at the end of the decade. Private sector financing has two sources: direct payments by users, and payments from public entities such as the INS and the CCSS, which contract out services for the care of members with occupational and general illnesses, respectively.

Resources of the System:

Human Resources: There is better accounting of human resources in the public sector than in the private sector, although professional schools are an important source of information for nationwide figures.

Human Resources in the Health Sector, 1993-2000

TYPE OF RESOURCE	Year							
	1993	1994	1995	1996	1997	1998	1999	2000
Physicians per 10,000 pop.	11.0	11.7	12.2	16.1	16.8	17.9	18.8	16.0
Professional nurses per 10,000 pop.	5.4	5.5	5.6	5.7	5.6	3,5	3.5	3.2
Dentists per 10,000 pop.	4.2	4.1	4.1	4.1	4.1	4.2	4.5	4.9
Laboratory technicians per 10,000 pop.	N/A	N/A	N/A	3.2	N/A	1.9	1.9	2.5
Pharmacists per 10,000 pop.	0.7	0.7	0.7	0.7	0.8	0.8	0.8	4.4
Radiologists per 10,000 pop.								0.5
No. of graduates completing post-graduate degrees in public health	17	21	19	7	27	56	23	30

Source: College for Professionals, 1999. The figures include only professionals who are affiliated with the CCSS, but it should be noted that that average total nationwide is 11.3 per 10,000. The ratios for 2000 were based on real data from that year's census.

In general, the trend is toward a growing number of physicians due to the increase in unregulated private educational centers. The numbers in other professional categories, however, remain the same or have declined.²⁷ Although the public sector continues to be the primary employer and the private sector has increased its share, unemployment among health professionals tripled between 1990 and 1999, going from 0.4% to 1.2%.²⁸

Human Resources in Main Public Sector Institutions, 2000

Institution	Physicians	Nurses	Nursing auxiliaries	Other workers	Administrative personnel	General services
Hospital Calderón Guardia	253	117	342	317	353	381
Hospital San Juan de Dios	277	218	594	395	438	602
Hospital Carlos Sáenz H.	145	129	235	149	249	276
Hospital México	247	173	338	340	306	432
Hospital de la Mujer.	37	26	71	42	57	83
Hospital Psiquiátrico	38	33	173	125	132	327
Total	997	696	1,753	1,368	1,535	2,101

Source: CCSS Statistical Yearbook, 2000.

The average wage of health workers in the public sector has grown moderately. As an example, the average salary of workers in CCSS medical facilities (including physicians, microbiologists, and dentists) was US\$587, US\$594, US\$621, and US\$650 between 1996 and 1999. It should be noted that the total salary of these workers is greater, since they receive additional payments for seniority, working exclusively as full-time staff, and training. From 1997 to 2000, 2,473 positions were created in the CCSS, most in health areas and in the Basic Comprehensive Health Care Teams (EBAIS) working at the first level of care. During that period consistent annual growth in the number of positions for health professionals was observed (3.38%, 8.06%, 3.99% and 1.36%).

Drugs and other Health Inputs: The number of pharmaceutical products registered by the Ministry of Health remained stable over the last decade. There has been a push to reduce and deregulate the cost of some drugs to facilitate their sale on an open market.²⁹ A policy to partially control the price of drugs exists in order to improve access to them and reduce the profit margin in the stage when they are sold to the consumer. That margin was less than 30% during the period from 1998 to 2000. The MH regulates the registry, manufacture, and sale of drugs, as well as the import and use of narcotics and psychotropic drugs. In 2000, an 800 number was made available to provide the public with therapeutic and price information about drugs.

The CCSS has an official list of drugs required for use in all its facilities. It includes 399 drugs classified into 54 therapeutic groups. Hospitals and clinics have standard treatment protocols for the principal pathologies and, by law all pharmacies in the country must have a professional pharmacist on staff. The top five selling products in the private sector in 2000 were Diclofenac 50 mg (US\$1.11); Naproxen 75 mg (US\$3.73); Amlodipine 5 mg (US\$1.31); Acitromizine 500 mg (US\$11.10); and Fluoxetine 20 mg (US\$3.31).³⁰ The five products representing the largest expenditure in 2000 were Pamidronate, US\$1,650,000; Nelfinavir, US\$1,616 933; Sulindac, US\$1,403 431; Cromoglicate aerosol, US\$1,395,745; and Indinavir, US\$1,396 660.

The public health services system has 25 blood banks that collect 56,000 units per year, 50% of which comes through volunteer donations, and the remainder through replenishment. Payment to blood donors is prohibited.

Selected Drug Indicators, 1993-1999

Indicator	1993	1994	1995	1996	1997	1998	1999
Registered pharmaceutical products	5,041	5,085	5,087	5,090	5,120	4,860	5,631
Percentage of brand-name drugs	60	60	60	60	60	90	85
Percentage of generic drugs	40	40	40	40	40	10	15
Total expenditure on drugs (retail price in thousands of US\$)	39,368	39,753	42,639	49,888	54,865	51,700	N/A
Per capita expenditure on drugs (price in US\$)	13.10	13.93	13.70	14.24	14.41	17.50	15.41
Percentage of public expenditure on health allocated to drugs	N/A	8.5	8.0	9.4	8.4	6.9	6.7
Percentage of MH expenditure allocated for drugs	NA	NA	NA	NA	NA	NA	NA

Sources: Bureau of Registries and Control, Ministry of Health. Does not apply to Social Security, since it is not a service provider.

Equipment and Technology: In general, public services (CCSS) for all levels of care have basic equipment, but when considered together with the shortage of personnel, there are shortages related to specialized treatments such as radiation therapy, which means that some services must be purchased from outside entities. With regard to the complexity of the existent equipment, four national hospitals have tomography equipment and transplant units for dialysis and intensive care. Seven more regional hospitals have only intensive care units. A study conducted by CCSS Operations Management on hospital equipment in the first half of 2001 found 6.6% to be in poor condition, 6.4% in fair condition, and the remaining 87% in good condition.

Availability of Basic Equipment in the Health Sector, 1999

Sector	Type of resource			
	Hospital beds per 1,000 pop.	Clinical laboratories per 100,000 pop.	Blood banks per 100,000 pop.	Diagnostic imaging equipment per 1,000 pop.
Public (CCSS)	1.6	3.65 (130 lab.)	0.7 (25 banks)	0.011
Private	N/A	2.4 (85 lab.)	0.1 (6 banks)	N/A
Total	N/A	6.5 (215 lab.)	0.8 (29 banks)	

Source: CCSS Statistics Department, 1999. Calculation based on a population of 3,558,697.

Equipment in the Health Sector by Level of Care, 1999

Sector	Type of resource					
	Delivery rooms		Clinical laboratories		Diagnostic imaging equipment	
	2nd Level	3rd Level	2nd Level	3rd Level	2nd Level	3rd Level
Public (CCSS)	13	11	122	8	32	8
Private	N/A	N/A	N/A	N/A	N/A	N/A
Total	13	11	122	8	32	8

Source: CCSC Statistical Yearbook, 1999.

In 2000, the CCSS allocated 4.42% of its operating budget to equipment maintenance, but since only 55% of its maintenance staff has technical training and the remainder has only basic skills, a portion of the budget was used to contract private services.

Functions of the Health System

Steering Role: The reform process in the 1990s reaffirmed the steering role of the MH and defined its four basic steering role functions: management and leadership; monitoring of health; regulation of services; and technology research and development. In 1998, the MH began to modify its organizational structure, redefine its work processes, adjust its staffing, and train staff to perform new tasks. Leadership and management are exercised by a consensus-building entity, coordinated by the MH (the Sectoral Health Council), and two instruments (health policy and the National Health Plan). Services are regulated by area of specialization and coordinated by three central bureaus: health services, the environment, and registries and control. Health monitoring is coordinated from a central office of the same name and is based on operational units at the regional and canton levels. The MH does not yet exercise a steering role in the area of technology research and development. The MH has no influence on public sector financing, which is centrally authorized and distributed by the Ministry of Finance. The Office of the Comptroller of the Republic (CGR) and the MH control public financing of and expenditure on health, but decentralized agencies such as the CCSS, the AyA, and the INS have their own mechanisms for the collection of funds and the control and auditing of expenditures. The MH's exclusive steering role has at the same time consolidated the role of the CCSS as the only public insurer and service provider for general diseases and maternity. The MH coordinates some intersectoral programs to address priority public health problems, such as the prevention of infant mortality and HIV/AIDS, as well as vaccinations and anti-smoking campaigns, but private sector participation in these efforts is sporadic. The Cabinet and the Sectoral Health Council make agreements on intersectoral and interinstitutional actions, and monitoring is carried out through the National Evaluation System. In its steering role, the MH regulates and evaluates health service production and facilities. Making the best use of the results of these efforts requires greater coordination and consensus building with the CCSS. The results of the accreditation of health facilities--for example, a strategy initiated by the MH in 1997 to improve the quality of care--have gone consistently unused by the CCSS in formulating plans for ongoing improvements.³¹ On the other hand, the MH has no legal influence on the accreditation of institutions that train human resources in health, since it is the National

Board of Rectors (CONARE) that oversee public education and the National Council of Higher Education (CONESUP) that oversees private education. However, insufficient regulation of private educational institutions such as the Center for Strategic Development and Research on Health and Social Security (CENDEISS) has led to the proliferation of private educational institutions that are overflowing with students from CCSS health facilities. There is an Interinstitutional Commission for the Development of Human Resources in Health that does not have regulatory functions, and has a limited role in stimulating research on and analysis of the sector's human resource needs.³² In terms of health surveillance, there are various information systems on the status of health, financing, insurance, and service delivery, but their uneven quality and timeliness, as well as the poor coordination among them, limits analysis and timely decision-making. There are mechanisms to regulate drugs but not medical devices and equipment. In 2001, however, the MH developed a proposal for their regulation, and the CCSS prepared the public health care plan that proposes interventions based on scientific evidence and the rational use of technologies.³³

Financing and Expenditure: Information on the financing and expenditure flows of public sector institutions is available and, in general, timely. However, there are many criteria for grouping and interpreting this information, and there is no single methodology for consolidating it. This leads to different values for the same variable. To overcome this problem, work began in 2001 on a system of national health accounts, with support from the Central Bank, health sector institutions, and PAHO technical assistance. Information on the private sector is limited, since the health sector does not have the legal power to demand such information and because private agents have little interest in opening up their records voluntarily.

Financing for the public health sector comes basically from the premiums of Social Security subscribers, which represent almost 80% of total public sector income and 55% of the income of the health sector as a whole. The share of funds from the public treasury is limited, and there has been a marked tendency for this share to decline: in 1993, it represented 18.3% and in 1999, only 9.2%, as a consequence of the transfer of prevention and promotion programs from the Ministry of Health to the CCSS. With regard to the public-private mix in financing, the available estimates point to an average ratio of 70% and 30%, respectively, and the continuous expansion of the private sector, more than 90% of which is financed by households.³⁴

Private expenditure is concentrated basically in the categories of drugs, dental services, and consultations, since the cost of hospitalization forces people to use the public services provided by the CCSS. Expenditures for private insurance and prepaid medical plans are still low, although their trend suggests an increase in the coming years. The share of income from international

cooperation declined dramatically in the 1990s (from 33.5% of total income in 1992 to just 1% in 1995). As of 1994, external assistance began to be in the form of long-term concessional loans at low interest rates, such as those extended by the World Bank, Spain, and the Inter-American Development Bank in support of sectoral reform.

Health Sector Financing, 1993-1999

(In millions of US\$ and % of GDP)

	1993	1994	1995	1996	1997	1998	1999
PUBLIC SECTOR	487.3	496.8	493.6	582.2	632.1	679.0	714.6
Percent of GDP	5.1	4.7	4.2	4.9	4.9	4.8	4.5
MH and other public central, regional and local level institutions ⁽¹⁾	111.0	105.8	101.2	98.2	92.9	86.9	77.4
Internal financing:	111.0	105.8	101.2	98.2	92.9	86.9	77.4
Treasury	89.4	90.5	77.1	78.8	74.9	76.2	65.5
Own funds	21.6	15.3	24.0	19.4	18.1	10.7	11.9
External financing							
Social Security ⁽²⁾	376.3	391.0	392.4	484.0	539.1	592.1	637.2
Subscriber premiums	328.3	338.9	337.7	426.0	474.3	506.9	565.3
Sale of goods and services	33.3	37.2	40.1	26.6	31.8	38.1	47.0
Capital revenues	14.7	14.9	14.7	31.4	33.0	47.1	24.9
PRIVATE SECTOR ⁽³⁾	162.3	184.0	201.3	218.1	243.9	276.2	311.5
Percent of GDP	1.7	1.7	1.7	1.8	1.9	2.0	2.0
Private insurance	2.7	3.2	3.6	4.1	4.7	5.6	6.5
NGOs (nonprofit)	13.7	15.2	16.3	17.3	19.0	21.1	23.3
Financing from households for private services	145.9	165.6	181.4	196.7	220.2	249.6	281.6
TOTAL	649.6	680.8	694.9	800.4	876.0	955.2	1,026.0
Percent of GDP	6.8	6.4	5.9	6.7	6.8	6.8	6.5

Sources: MH Budgetary Bureau; Kleysen (1992) and Bitten and Sáenz (2000). (1) The institutions included in this group are the MH, the National Center for the Prevention of Drug Abuse (CENADRO), the Technical Council for Social and Medical Care (CTAMS), the Institute on Alcoholism and Drug Dependency (IAFA), the Costa Rican Institute for Health and Nutrition Research and Education (INCIENSA), and the Office for International Cooperation of Health (OCIS). (2) Corresponds to health insurance income administered by the CCSS. (3) Estimate based on Kleysen (1992) and Picado and Sáenz (2000).

Health Expenditure and Foreign Debt

	1993	1994	1995	1996	1997	1998	1999
Public health expenditure per capita in US\$	146.6	145.5	140.9	162.0	171.7	180.2	185.3
Public health expenditure/Total public expenditure (%)	23.8	18.8	18.3	20.2	21.3	21.6	20.3
Total per capita health expenditure in US\$	195.4	199.4	198.3	222.7	238.0	253.5	266.1
Total health expenditure as % of GDP	6.7	6.4	5.9	6.8	6.8	6.8	6.5
External debt in health/Total external debt	2.0%	1.6%	1.4%	1.6%	1.7%	1.8%	1.7%

Sources: Budget Bureau of the Ministry of Finance, Comptroller General of the Republic; Kleysen (1992); and Picado and Sáenz (2000).

Public expenditure and total health expenditure per capita have increased steadily in recent years, unlike public expenditure on health as a proportion of total public expenditure and total health

expenditure as a percentage of GDP, which remained relatively stable. The latter is due not so much to insufficient growth of health expenditure, but to the strong expansion of GDP. The average annual growth rate was 5.4% over 1992-1999.

Health Sector Expenditures by Function, 1993-1999

(in millions of US\$)

	1993	1994	1995	1996	1997	1998	1999
1. PUBLIC SECTOR⁽¹⁾	400.2	467.1	604.0	631.8	705.7	752.2	806.8
Promotion, preventive care, and curative care	286.6 71.6%	345.7 74.0%	473.6 78.4%	494.4 78.3%	556.9 78.9%	588.2 78.2%	630.8 78.2%
Training of human resources	7.7 1.9%	8.3 1.8%	8.6 1.4%	8.5 1.3%	8.6 1.2%	9.4 1.2%	9.5 1.2%
Production and purchase of inputs	84.9 21.2%	96.1 20.6%	96.4 16.0%	106.9 16.9%	108.6 15.4%	125.5 16.7%	125.3 15.5%
Administration	17.4 4.4%	15.8 3.4%	22.6 3.7%	18.7 3.0%	23.5 3.3%	24.3 3.2%	30.9 3.8%
Facilities	3.5 0.9%	1.2 0.3%	2.8 0.5%	3.3 0.5%	8.1 1.1%	4.9 0.7%	10.3 1.3%
2. PRIVATE SECTOR	N/A						
TOTAL							

Source: (1) Only includes CCSS expenditures. Office of the Budget, Costa Rican Social Security Fund.

Information on public sector expenditures by function is available only for the CCSS. Health promotion, prevention, and curative health account for almost 80% of total expenditures. The other categories have maintained relatively stable shares, although the share for facilities has been growing in recent years. According to the reports on budget execution, half the expenditures for the direct delivery of health services are concentrated in the third level of care, while the first and second levels share the other half. During 1997, 1998, and 1999, expenditure at the first level represented 20.7%, 17.5%, and 21.0%, respectively, and at the second level, 29.7%, 32.7%, and 30.0%. Before sectoral reform, the first level of care received only 12%, but management commitments have tended to stabilize that allocation closer to double that figure.³⁵ With regard to expenditures by item of expenditure, personal services represent the largest category, accounting for 68.6% of the total during 1995-1999.³⁶ Expenditures for materials and supplies were stable at 20%. Although there is no consistent data on drugs, what data is available shows that in 1998, drug expenditures came to US\$46.6 million, 8.5% of total CCSS expenditure in that year. There is no information for the private sector on expenditure by item of expenditure.

Health Sector Expenditure by Item of Expenditure, 1993-1999

(in millions of US\$)

	1993	1994	1995	1996	1997	1998	1999

1. PUBLIC SECTOR (1)	486.8	538.2	607.1	600.1	606.7	626.6	654.3
Personal services	281.5	346.7	427.0	403.9	412.4	423.4	457.5
	57.8%	64.4%	70.3%	67.3%	68.0%	67.6%	69.9%
Non-personal services	65.8	64.9	64.0	67.9	66.1	69.2	59.2
	13.5%	12.1%	10.6%	11.3%	10.9%	11.0%	9.1%
Medicines and drugs							
Materials and supplies	127.6	119.5	111.9	120.7	121.5	127.1	134.8
	26.3%	22.2%	18.4%	20.1%	20.0%	20.3%	20.6%
Medical and health equipment							
Others equipment and repairs	11.9	7.1	4.2	7.6	6.7	6.9	2.8
	2.4%	1.3%	0.7%	1.3%	1.1%	1.1%	0.4%
Construction of works							
2. PRIVATE SECTOR	N/A						

Source: (1) Includes only CCSS expenditure. Office of the Budget, Costa Rican Social Security Fund.

Health Insurance: Health insurance is universal, covers all the country's inhabitants, and is the responsibility of the CCSS. Insurance is compulsory for all salaried workers and pensioners, the poor are ensured by the State, and the remainder of the population can obtain insurance coverage on a voluntary basis. Health insurance is financed in three ways: employers contribute 9.25% of the wages paid; workers contribute 5.50% of their wages; and the State contributes 0.25% of the national wage bill. There is reliable information on health insurance coverage. In 1999, the CCSS reported that it had insured 89% of the population (direct beneficiaries, plus family members and pensioners) through seven different enrollment modalities, and that there were 402,245 people without insurance.³⁷ However, legally speaking, 100% of the population has access to medical care, regardless of their status in terms of insurance and nationality. CCSS health insurance is provided through five comprehensive primary care programs geared to children, adolescents, women, adults, and the elderly, as well as through hospital care, diagnostic-therapeutic support services, drugs and dental care for all beneficiaries. Some foreigners and citizens purchase their health insurance from a national company (INS) and foreign companies. Furthermore, prepaid insurance is available through private companies, whose income in 1998 was close to 10% of private health expenditure.

Delivery of Health Services: The MH has transferred practically all population-based programs for health prevention and promotion to the CCSS (except for child nutrition, vector control, some zoonoses, and basic sanitation programs). However, the Ministry continues to mandate some regulatory guidelines. In the last decade, there has been an emphasis on the prevention of chronic diseases through special programs, such as those for the detection of diabetes, hypertension, and cancer in woman. However, programs also continue for the prevention of infectious diseases such as diarrhea and cholera, acute respiratory infections, and pulmonary tuberculosis. The MH is still

responsible for programs for the prevention and control of dengue and malaria, as well as for the elimination of canine rabies. With regard to specific protection, vaccination remains a priority program. In 1999, coverage for children under 1 year reached 93% for DPT, 93% for polio, 82% for BCG, and 92% for measles. In 2000, these respective coverage rates were 88%, 80%, 92%, and 82%, an overall decline from the previous year. On the other hand, a national rubella vaccination campaign in 2001 covered 100% of women of childbearing age. In 1994, the country was certified for poliomyelitis eradication, and between 1996 and 2000 there were no reported cases of diphtheria or neonatal tetanus. There are public health programs to address some micronutrient deficiencies (iodine, folic acid, fluorine, and vitamin A). Finally, coverage rates for prenatal care and delivery by trained staff in 2001 were 70% and 97.5% respectively.

Individual Health Care Services

Information on health services management at the first and second levels of care is generally not reliable because of the excessive number of criteria used by the prevailing information and evaluation systems. Users do not have the option of selecting among regular CCSS services; however, through what is called “mixed medicine,” members can pay for consultations with the private physicians of their choice and then obtain the drugs and tests they need through the CCSS.

Primary Care: In 2000, the CCSS had 732 Basic Comprehensive Health Care Teams, or EBAIS, made up of a physician, a nursing auxiliary, and one or more primary care technical assistants (ATAPs). Each team serves a population of 3,500 on average. In 2000, only 70% of the population was covered by those teams; the remainder had to use conventional outpatient and emergency services. Some first-level care centers have computerized information systems, which are used primarily for administrative management and less so for clinical records. Production at the first level of care is shown below.

Production of Services, 2000

Type of Service	Number	Rate per 1,000 population
Consultations and check-ups by physicians	7, 736,860	2,030
Consultations and check-ups by nonphysicians	327,285	86
Consultations and check-ups by dentists	1,350,758	354
Emergency consultations	3,313,100	869
Laboratory tests	32,275,903	8,471
X-rays	1,807,267	474

Source: CCSS Yearbook, 1996.

The five most frequent reasons for outpatient consultations with the CCSS are problems with the respiratory system (17.2%), the genitourinary system (8.84%), the musculoskeletal system (8.28%), the circulatory system (7.34%), and endocrine and metabolic causes (6.17%).³⁸

Secondary Level of Care: In 2000, the CCSS had 10 clinics, 13 peripheral hospitals, and seven regional hospitals. Theoretically, this network is sufficient to cover 100% of the population. All facilities have computerized information systems for administrative management and clinical records.

Health Service Indicators at the Second Level of Care, 2000

Total discharges	Occupancy rate	Average days of stay
325,216	81.67%	5.46

Source: CCSS Yearbook, 1996.

In 1999, the principal reasons for hospital discharges were pregnancy, childbirth and puerperium (32.62%); diseases of the digestive system (9.01%); diseases of the respiratory tract (6.88%); problems with the circulatory system (5.30%); and tumors (4.99%).

Tertiary Care: The CCSS has three national general national hospitals in the nation's capital (México, San Juan de Dios, and Calderón Guardia), as well as five national specialized hospitals (for women, children, the elderly, rehabilitation, and psychiatry). The National Cancer Institute is still in the planning stages.

Technical Quality: There is an ongoing sectoral program to improve quality and the professional teams in public hospitals, regions, and health areas. Those responsible for carrying out the program are trained in methods and tools to improve quality.³⁹ Also of note is the systematic evaluation of quality at the different levels of care that the MH conducts through such procedures as hospital accreditation, comprehensive evaluation of the first level of care, analysis of infant and maternal mortality, and evaluation of benchmarks such as cervical cancer. In addition, some hospitals have ethics committees, although their work is geared more to evaluating clinical research projects than to reviewing the quality and ethics of care.⁴⁰ Most second- and third-level hospitals have infection control committees, but their operation is sporadic. In 1999, 21.7% of deliveries attended by the CCSS were by cesarean section. The maternal mortality rate in 1999 was 19 per 100,000 live births, and infant mortality was 11.8 per 1,000 births. The autopsy rate was 13.38 per 100 deaths, and 60% of maternal and infant deaths were audited.

Perceived Quality: The first global survey of user satisfaction with the CCSS was conducted in 1998. By 2000, management commitments required compulsory annual measurement of user satisfaction through a standardized institutional survey. These surveys were conducted in 2000 by

92% of hospitals and 77% of the health areas. The results showed that more than 70% of users were satisfied with the care. However, MH interviews with mothers following their experience with the health services found that only 45% of them were informed about the complications associated with pregnancy, childbirth, and care of the newborn. To further identify problems with the quality of care, the CCSS in 1999 promoted the establishment of an office in each of its health facilities to inform users of their rights, as well as health boards to monitor the quality of care. A survey of 107 health boards in 2000 found that only 54% of them had participated in quality-related activities.⁴¹ Use of evidence-based clinical practices to improve the quality of care moved ahead in 2000 in two national hospitals.

3. MONITORING AND EVALUATION OF SECTORAL REFORM

3.1 Monitoring of the Process

Monitoring of the Dynamics: In the 1990s, various endogenous as well as exogenous factors gave rise to the sectoral reform process and institutional modernization. Endogenous factors included the widening gap in the ratio between health expenditure and GDP (from 6.9% in 1988 to 8.5% in 1999); the growth of hospital expenditure versus outpatient expenditure; the predominance of centralized regulatory planning and management; inequity in the allocation of resources, with little investment in the less-developed cantons; expenditure of less than 20% for the first level of care; annual growth of 16.4% in hospital expenditure; lower productivity (consultations fell from 3.9 per person in 1988 to 3.6 in 1999); the dichotomy of the health model, with a curative CCSS and a preventive MH; and the financial imbalance of the health sector between 1986 and 1995, with annual financial growth of 65.1% and expenditures of 74.9%. Exogenous factors included the country's financial crisis due to lower economic growth and higher debt payments; the demographic transition, which has seen an increase in the number of people over 60 years of age; the change in the epidemiological pattern, due to the increase in chronic diseases; and the need to strengthen the steering role and promote the separation of functions in the health system.^{42 43}

As part of State reform, in the early 1990s, the project preparation unit in the health sector coordinated the development of a health sector reform project that had four components or specific projects: the steering role of the MH and its strengthening; institutional strengthening of the CCSS; a new system for allocating financial resources; and adaptation of the health care model. In 1992, the Legislative Assembly approved Laws 7374 and 7441 to arrange for two loans, one from the IDB in the amount of US\$4.3 million to support and strengthen the ministerial steering role, and

the other from the World Bank, in the amount of US\$22 million to support the execution of other specific sectoral reform projects. Implementation of those projects began in June 1994; each having established goals, activities, deadlines, responsibilities, and general evaluation criteria. The executing units of these projects have done their monitoring and evaluation, but there has been little dissemination of these reports and their results are little known. Negotiations began in 2001 for a new World Bank loan to support the continuation of certain sectoral reform processes. If approved, the loan will be executed by the new government that takes office in 2002.^{44 45}

Monitoring the Contents

Legal Framework: In addition to the General Health Law (LGS) of 1973, which lays the foundation for the ministerial steering role, and the 1992 laws for financing the reform, other regulations have been approved as backing for the sectoral reform process. These include Executive Decree 27446-5 of 1998, creating the National Health Sector Council; the Hospital Deconcentration Law of that same year; and the Regulations of the Boards of Health in 1999. Although the objectives of the reform are to improve coverage and increase the efficiency of expenditure, health policy for its part aims to achieve two goals: to reduce differences in the levels of health between the regions of the country and to ensure equal opportunity, effectiveness, and quality of care for all. These legal and health policy instruments enable the MH to engage in broad sectoral management and intersectoral coordination that ranges from environmental regulation to addressing emerging problems such as AIDS and the resurgence of malaria.

Right to Health Care and Insurance: The Constitution and the first three articles of the LGS establish the universality of and the right to health care for all the country's inhabitants.⁴⁶ Subscription to and premiums paid for public health, disease, and maternity insurance administered by the CCSS are compulsory for all salaried workers. The subscription of the poor is subsidized by the State, while the remainder of the population participates on a voluntary basis.⁴⁷

Steering Role and Separation of Functions: The steering role and service delivery functions are separated, but the transfer of some prevention and care programs from the MH to other State institutions has yet to be completed, as is the case in child nutrition (CEN-CINAI). To exercise its sectoral steering role, the MH transformed its organizational structure and trained its personnel to perform new tasks. However, these changes are still in progress, and an evaluation conducted in April 2001 found that weaknesses persist in the performance of some essential public health functions, such as research on public health problems, an improved and guaranteed quality of services, the development of public health resources, and health promotion.⁴⁹ With regard to the

regulation of sectoral financing, there is almost no participation by the MH, since in addition to lacking political support, it has neither trained staff nor information systematized into a national health account. Health monitoring has not been developed to a large degree in Costa Rica, because of the predominance of the clinical model and the lack of importance assigned to work in the public health area. On the other hand, there has been progress in the regulation of services, the environment, and health inputs. With regard to the regulation of health care, the MH's efforts to certify and accredit public and private facilities are particularly noteworthy, as is the evaluation of the EBAIS. Nevertheless, the results of these regulatory and quality improvement mechanisms are scarcely used, since there are no agreements in this regard between the CCSS and the MH. Nor are there mechanisms that force the CCSS to put recommendations from the MH into practice.⁵⁰ The CCSS reports data on service production, morbidity, and mortality to the MH. However, for administrative and technical reasons, this reporting has not been done in the way needed to efficiently monitor health. The CCSS publishes a statistical yearbook and the MH its annual report in order to keep the legislature and the general public informed of their activities. In order to improve the management of its insurance function, the CCSS since 1997 has developed internal processes to separate the financing (collection and budgetary allocation), purchasing (through commitments between management and providers), and delivery (internal and external providers) of health services. To monitor the quality of service care and production, the CCSS in 1999 created an internal agency called the General Health Services Bureau (SUGESS). Its operations continue to be questioned by staff members both within and outside the institution.

Decentralization Modalities. The law deconcentrating CCSS Hospitals and Clinics, passed in 1998, promotes the deconcentration of authority and resources at the subnational levels of that institution. The law grants the institutions greater power to administer resources and contract services out to third parties. The MH also is in a process of deconcentrating authority to the regional and local levels so that it can exercise the functions connected with its sectoral steering role. Both cases imply the transfer of risks and responsibilities, but the Hospital Deconcentration Law also provides the legal backing so that these deconcentrated entities can begin to operate with the central level within a contractual and negotiating framework, using management commitments as an instrument.

Social Participation and Control. Sectoral reform has promoted social participation through the work of the EBAIS in household and community training for self-care in health. As of 1999, the CCSS began regulating the operation of the Health Boards, community groups empowered to participate in the planning and management of health facilities, as well as in monitoring the quality

of services. An evaluation in 2000 showed that 40% of these Boards conduct business on a regular basis.⁵¹

Financing and Expenditure: The CCSS and the MH have data on their budgets, but Costa Rica does not have a consolidated information system on financing, financial flows, and health expenditures, since the national health accounts system is still being developed. The CCSS has a model for resource allocation that is based on productivity, and, since 1997, the budget has been allocated to facilities on the basis of capitation criteria for first-level care and of hospital production units (UPH) for the second and third levels, through management commitments. CCSS functions of financing, procurement, and service delivery have been separated as follows: Financial Management collects funds for health insurance and pensions through a centralized collection system (SICERE).⁵² Administrative Management, through its Office of the Director for the Procurement of Services, contracts out health services to 120 providers through management commitments (29 of which are with CCSS hospitals); and Medical Management sets the standards for provider care. The reform has allocated a larger budget for the first level of care (from 12% prior to the reform to 21% in 1999). Total per capita health expenditure increased from US\$195.4 in 1993 to US\$266.1 in 1999. This is linked with economic growth and the increase in the financing of CCSS health insurance, which went from 4.1% to 4.8% of GDP over the same period. This trend may change due to lower economic growth and because management commitments are expected to help contain costs.

Supply of Services and the Model of Care: The principal sectoral reform strategy to improve the coverage of basic health services and access to them has been the adaptation and development of a comprehensive care model with five assistance programs. Program activities at the first level of care are carried out by the Basic Comprehensive Health Care Teams, or EBAIS, headquartered in small clinics or peripheral facilities in the country's 90 health areas. The assistance programs are linked with the care priorities identified through situation analysis. The Health Care Plan for the Population (PASP) was developed in 2001 to strengthen these programs.⁴⁸ The CCSS has increased the supply of health services and access to them through the EBAIS, and through complementary mechanisms such as corporate medical officers, mixed medicine, and the contracting of some services to third parties.⁴⁹ ⁵⁰ In addition to offering comprehensive services in CCSS facilities (or in cooperatives or facilities with which the CCSS has contracts), the delivery of services and access to them has been expanded through two modalities that operate in the way of co-payments. One is called mixed medicine (the insured pays for the consultation with a private physician of his or her choice, and the CCSS pays for diagnostic services and drugs). The other is

known as a corporate medical officer (the company hires a physician to serve workers and their family members, and the CCSS pays for diagnostic services and drugs). This model of care also facilitates access to first-level services, since the EBAIS work with households to identify at-risk individuals and families. The teams also provide home care for certain pathologies. Primary care patients who require special attention are referred to second- and third-level facilities, but problems persist with referral and counterreferral mechanisms, since only 28.4% of the EBAIS monitor and provide follow-up for patients. The second and third levels of care have also increased access by extending their hours of operation and contracting out services to third parties (radiation therapy, ophthalmology, and pathological anatomy). Even so, these institutional efforts are still insufficient to reduce or avoid waiting lists of longer than three months in certain specialties such as gynecology, orthopedics, and general surgery, as well as for diagnostic studies (gastroscopy and mammography) and specialized outpatient consultations.

Management Model: The operational tool for the new model of resource allocation in the CCSS is the management commitment, which has prompted the directors of health areas and hospitals to adopt a managerial approach and forced them to get the training and develop the skills to organize the resources for which they are responsible. The historical role of the central level as benefactor and protector of the local level and its facilities is gradually being transformed into a contractual relationship in which both levels share risks and responsibilities. The management commitments are also used as a tool to negotiate with external providers, as well as among the different administrative levels at the central level. At the first level, the financier (central services of the CCSS) purchases a “*per capita*” package of services (through a capitation fee), and in the hospitals it purchases “*hospital production units*” (UPH). This management model began in the lower-level rural and peripheral socioeconomic areas and spread gradually to the urban environment. In 1995, 274 facilities with 227 EBAIS were incorporated into the model; between 1996-1998, 222 facilities joined with 198 EBAIS; and from 1999 to 2000, another 227 EBAIS were added, for a total of 652. In 2000, this readjusted model covered 70% of the population. However, in rural areas coverage reached 90%, and progress toward the goal of 800 EBAIS for 2002 reached 81.5%. The capacity to buy and sell services from providers has been strengthened with the Hospital Deconcentration Law of 1998, which promotes the self-management of facilities and the use of business criteria in their management. Since 2000, all hospitals and health areas have signed management commitments containing goals and objectives. To sign the agreement for the subsequent year, a quantitative evaluation must be conducted by the Administrative Management's procurement unit.

In 1988, for the first time, management of an urban CCSS health facility (Pavas) was turned over to health workers organized into a cooperative. To date, the CCSS provides care for some 400,000 people (11% of the insured population) through management commitments with four health cooperatives and an agreement with the University of Costa Rica (UCR).

Human Resources: The School of Public Health and other faculties of the UCR, as well as the Central American Institute for Business Education (INCAE), the State University for Distance Education (UNED), and the Center for Strategic Development and Information on Health and Social Security (CENDEISS), have collaborated to train the sector's human resources in order to meet the needs prompted by the reform process. Labor relations with health workers are governed by general legal mechanisms such as the Labor Code and the Civil Service Statute, as well as by specific professional regulations such as the Statute Law for Medical Services and the Nursing Services Statutes. Most workers with greater seniority in the sector have stable employment (85% of them in the MH have tenured positions) and are unionized. However, both the management commitments and the Hospital Deconcentration Law have promoted new hiring alternatives, more flexible labor schemes, and new payment modalities, while reducing the creation of new posts. This has met with resistance from the country's many unions, which have frequently denounced and protested against the reform, although with little impact due to the negotiations between the parties involved in the conflict. The sector still does not have sufficient trained staff to meet its needs in terms of exercising managerial functions and the central level steering role. Nor does it have sufficient trained staff at the peripheral level to exercise health functions and operate the new model of care. There continue to be lags in adapting the profiles of staff and academic posts.

Medical and nursing schools have initiated certification processes based on continuing education programs, whose contents include topics dictated by the reform. However, the country lacks clear policies on human resources education, and the proliferation of educational centers and graduates is exceeding the capacity of the public sector to absorb them and increasing unemployment among health professionals. An example is the decline in the contracting of physicians by the CCSS from 93.7% in 1985 to 85% in 1990, 74.5% in 1995, and 51.9% in 1999. The sector has no performance incentive system, although professionals receive economic benefits through annual wage adjustments, working full-time exclusively, and professional or administrative career paths. There are training programs financed with national funds, IDB and World Bank credits, and funds from international organizations such as PAHO, but the overall investment is not known with any precision. In 1999, the CCSS invested 0.2% of its budget (431 million colons) in education and professional education.

Quality and Health Technology Assessment: There is no sectoral program to evaluate the quality of medical devices and equipment. The MH is developing a regulation in this regard, and the CCSS has initiated a process for the education of clinical engineers in order to improve the technology assessment and management. The MH has also carried out the accreditation of health facilities and services since 1998 as part of its regulatory function and the sectoral program to improve quality, based on standards that primarily evaluate the infrastructure and available equipment.

3.2 Evaluation of the Results

In this profile, the reform is evaluated in terms of the impact of the four components identified in its agenda (the steering role and strengthening of the MH, institutional strengthening of the CCSS, the new system to allocate financial resources, and adaptation of the health care model) in the following five analytical categories: equity, effectiveness and quality, efficiency, sustainability, and social participation and control. Obviously, changes in the indicators for these categories cannot be attributed to sectoral reform only but to the influence of other variables as well.

Equity

In Coverage: Basic care coverage has improved in the country's seven provinces as well as urban and rural areas. However, there are still some differences between different population segments attributable to deficiencies in resource allocation and management. Examples of national coverage averages in 2000 for basic primary health care activities include the following: vaccination coverage in children under 1 year was 88% for DPT3, 80% for OPV3, 92% for BCG, and 82% for measles; 89% of women received prenatal care; 97% of deliveries were attended by trained personnel; and 75% of women used contraceptives.⁵¹

In the Distribution of Resources: The average public health expenditure per capita was US\$185 in 1999. However, resources to produce health services, such as for personnel and hospital beds, are not distributed among the provinces and cantons on the basis of population or need-for-care criteria. This implies that per capita expenditure is not equitably distributed. In 1999, the national averages for the number of physicians and nurses were 15 and 11.3 per 10,000 population, respectively. The lowest averages were in rural regions with the highest rates of infant and maternal mortality.⁵² In 1998 a study that combined data from the CCSS and the Multipurpose Household Survey showed that human resources were centralized. For example, the Chorotega region had only 6.4 physicians per 10,000 population, while the Central Region had 10.5; and there were 1.6 nurses per 10,000 population in the Brunca region compared to 4.4 in the Central region. Another problem is the imbalance in the number of professionals in comprehensive health services:

the doctor/nurse ratio was 2.4 in Brunca and 4.1 in the Central region.⁵³ Another 1998 study showed that although the average number of beds at the national level was 20 per 10,000 population, in rural areas that adopted the reform in that same year, the ratio was only 9 per 10,000 population. In primarily urban areas that did not participate in the reform, the ratio was 24 per 10,000.⁵⁴ In other words, despite progress; additional efforts are still needed to achieve greater equity in the distribution of human resources and materials.

In Access: Between 1995 and 2000, the percentage of underreporting of mortality was reduced from 2.1% to 1.0%, and the percentage of deaths without any type of medical care was so low that the influence of sectoral reform on these indicators could not be gauged. A 1998 study showed that the reform had improved geographical access to basic care units, and that access was practically the same in rural and urban areas (average distances to the nearest facility of 1.28 km and 1.10 kms, respectively). Similarly, areas that adopted the reform in 1995 improved the annual number of physician's hours available per 1,000 population (from an average of 42 hours in 1994 to 59 in 1998). First-level and emergency care are provided on the same day and without delay in virtually all facilities in the country. However, specialty consultations and certain tests and specialized surgical procedures can be delayed as long as six months. In order to improve access, legal, administrative, and financial mechanisms have been established to extend clinic hours and to contract services out to third parties. However, there are still waiting lists longer than three months for a number of specialties.

In the Use of Resources: Sectoral reform appears to have contributed to a slight increase in the use of outpatient services. The ratio of outpatient consultations per 1,000 population went from 1,944 in 1994 to 2,237 in 1998 and 2,265 in 2000. This result coincides with the gradual improvement in the delivery of services and access to them, which was promoted by the reform, mainly for the first level of care. This seems to be corroborated by patterns in the ratio of general medical consultations to specialty consultations, which were 1.74, 2.17, and 2.25, respectively, for the aforementioned three years. The use of resources for hospital care, in contrast, remained constant and even saw a slight decline, as the number of discharges per 1,000 population during those same years were 89.5, 85.3, and 86.1, respectively. This is due, among other factors, to more rational use of hospitalization and better response capacity at the first level, both of which help to contain costs. The reform has also influenced prenatal care: 89% of the coverage goal set by the health areas was achieved in 2000. However, the reform has not influenced the delivery of care by trained personnel, which stood at 98% but was already very high before the reforms began.

Effectiveness and Quality

Effectiveness: The separation of functions promoted by the reform process seeks to improve the performance of the MH as a regulatory agency and of the CCSS as a public health service provider. The MH has promoted the permanent monitoring of infant and maternal mortality through commissions at all organizational levels. It has also supported regulation of the quality of care through the certification and accreditation of facilities. For its part, the CCSS has improved coverage, organizing the services by geo-population zones called health areas and using the EBAIS. These improvements are helping to make services more effective and to reduce the gaps between the various regions. From a rate of 12.6 per 1,000 population in 1998, infant mortality declined to 11.8 in 1999 and 10.2 in 2000. The average percentage of newborns with low birthweight was 7% during 1990-1998 and has been one of the lowest rates in the Region of the Americas since 1980. Mortality from cervical cancer exhibits a downward trend, decreasing from 9.06 per 100,000 women in 1994 and to 7.70 in 1998. In the 1990s there was a decline in the incidence of vaccine-preventable diseases such as measles, rubella, and whooping cough. In contrast, some problems closely associated with socioeconomic and cultural factors, such as AIDS and tuberculosis, have increased. Mortality rates from specific cardiovascular causes such as cerebrovascular, ischemic, and pulmonary circulatory diseases remained stable between 1989 and 1998. The respective rates were 54, 26, and 16 per 100,000 population in the latter year. However, mortality from hypertensive disease tripled over the same period (from 3 to 10 per 100,000 population). Although general morbidity from ischemic and cardiovascular diseases and tumors increased in percentage terms during the 1990s, the rates actually fell, from 537 per 100,000 over 1970-1974 to 377 over 1985-1998. Mortality from diabetes increased from 6.6 per 10,000 population during 1985-87 to 8.5 during 1994-96. This epidemiological overview shows that one of the main challenges for the prevailing readjusted care model continues to be to promote healthy lifestyles.

Technical quality: There are units in all health areas trained to evaluate the quality of care as well as maternal and child mortality. In 80% of these areas, intervention plans designed to solve identified problems are carried out. Seventy percent of health areas use protocols to improve the care processes for benchmarks such as growth and development, pregnancy in adolescents, and the threat of premature birth. The records of 89% of first-time patients meet the quality standards established by the CCSS. Hospitals have average occupancy rates of 82%. Indicators that reflect the quality of care include the following: hospital mortality, 19 per 1,000 population; postoperative mortality, 6.5 per 1,000 population; and hospital maternal mortality, 1.7 per 1,000 population. One

problem in terms of quality is the waiting list—longer than three months—for both specialized consultations and surgical care. On average, 75% of the hospitals have one or more specialties with this problem. The 29 hospitals have corrective maintenance programs, but only three of them have programs for preventive maintenance. The results of the evaluation of management commitments in 2000 make it possible to calculate coverage with quality (defined as coverage that fulfills the basic standards of care) as a proportion of total coverage for each of the five assistance programs. For children under 1 year, total coverage was 93%, but coverage with quality was only 47%; for children from 1 to 6 years, total coverage was 44% and coverage with quality, 25%; for adolescents, the respective total and quality coverage rates were 29% and 14%; for prenatal care, 89% and 42%; and for older adults, 44% and 33%. These results show that, in general, only half of total coverage can be defined as quality care. However, systematic application of an evaluation of quality as part of the management commitments should be seen as a step towards ongoing improvements in the future. Two achievements attributable to the model of care promoted by the reform and to the management commitments. One is the comprehensive nature of the health care provided at the first level through EBAIS, including the timely supply of essential drugs; and the other is the decline in the incidence of hospital-acquired infections, which has dropped since this indicator has been considered in the evaluation of the management commitments as a criterion for measuring quality. The average index of hospital-acquired infections in 1999 was 9.6%, with a high of 20% and a low of 3.6%. The most common infections were of the skin and mucous membranes (in 69% of hospitals), followed by infections of the urinary and respiratory tracts (in 48% and 41% of hospitals, respectively).

Perceived quality: In the public health system, users have no way of selecting either the health care facility or the medical professional they want, since both location and staff are assigned by the CCSS according to the user's place of residence. Some beneficiaries with the ability to pay who are unsatisfied with the waiting lists and/or the quality of care resort to an alternate CCSS system known as "mixed medicine," under which the patient pays for the consultation with a private physician, while the drugs and laboratory studies are provided by the CCSS. Eighty percent of the country's health areas have quality control programs as well as a public comptroller office that reviews whether the care provided is appropriate and patient-friendly. CCSS hospitals also have an office of Office of the Comptroller to address user complaints, as well as a health board that monitors the use of resources and the quality of care. In a 2000 SUGESS survey of users of 22 facilities regarding the quality of care, 19% of respondents said that the waiting period to obtain an appointment was unacceptable; 13% said the time spent in the waiting room for a consultation was

excessive; and 16% said it took too long to obtain drugs. On the other hand, 88% said they received proper medical treatment and 81% said they received the explanations they needed from the physician. The People's Defender also helps in monitoring the quality of services, conducting studies and making recommendations to the State and the sector on a permanent basis.

Efficiency

In the Allocation of Resources: To increase efficiency, the reform has promoted the allocation of financial resources to facilities through the management commitment model, which is based on coverage, productivity, and quality goals. The evaluation of these commitments shows that on average, 97% of the health areas that provide specialized consultations and 96% of hospitals meet the committed production goals. The reform has also helped to improve the allocation of resources for primary care. In 1994, prior to the reform, only 12% of health expenditure was allocated to primary care, while in 1999 that figure was 21%. The reform has also given priority to rural and peripheral urban areas, allocating greater resources to them for infrastructure, equipment, and human resources. This strengthening of the first level of care enables the CCSS to gradually incorporate health prevention and promotion programs that have been transferred to it by the MH. For their part, 93% of hospitals have programs that promote healthy lifestyles and 95% provide comprehensive care for cases of domestic violence, although intersectoral coordination in support of programs to address this problem is still weak.

In Resource Management: The results of the annual evaluation of management commitments show a trend toward better coverage, productivity, and quality in both hospitals and health areas. In 2000, coverage in health areas was 93% for care to children and 89% for prenatal care. The average number of consultations per contracted medical hour was 3.5, and the average number of general and specialized consultations per inhabitant was 1.4 and 0.6, respectively. Hospitals on average reached 85% of quality and productivity objectives, with a range from 70% to 99%. Hospital admissions per 100 population were 8.1, the hospital bed occupancy rate was 82%, and the hospital bed turnover rate was 55.5. Hospital stays averaged 5.5 days and preoperative stays, 1.1 days.

Sustainability

Public opinion polls conducted by the press find that the public considers health important and recognizes the value of the institutions connected with it. The public is aware of the CCSS and its functions, and despite the complaints about medical care, citizens recognize the importance of CCSS as their guarantor of public health insurance. The steering role functions of the MH are less known, maintained at a low profile, and information about them is not sufficiently disseminated

inside or outside the health sector. The management of financial resources at the sectoral level is limited by the lack of systematic, disaggregated information on public and private health financing and expenditure. However, the reform is encouraging the development of accounting information systems in hospitals and health areas, with a clear view to billing for the services that both of them offer. Actuarial studies conducted by the CCSS in accordance with certain hypotheses suggest that health insurance is financially sustainable for the next 10 years. To extend this time horizon, the CCSS improved its collection system by implementing a centralized mechanism in 2001. High-level sector officials in both the CCSS and the MH are trained to negotiate and arrange for external funds, and it was expected that by the end of 2001 the two institutions would have concluded negotiations on a new bank loan to extend the reform processes for the next five years.

Social Participation and Control

The reform has promoted formal opportunities for social participation within the health services system. Examples are the health boards in all facilities and the Citizen Comptroller Offices in most. At the government level, sector institutions account for their activities through the National Evaluation System. Outside the public sector, the People's Defender and the media are citizen control mechanisms that have brought health issues and the role of the health authorities to the attention of the general public.

Thirty professionals and decision-makers involved with the nation's health sector, as well as the PAHO/WHO technical team in Costa Rica, participated in preparation of the second edition of the profile. The following entities participated in the external review of the document: the Office of the Director of Health Development and the Office of the Director of Health Services of the Ministry of Health; Medical Management, Modernization Management, Pension Management, and Financial Management of the Costa Rican Social Security Fund; the Office of the Director of the Budget Bureau of the Ministry of Finance; and the University of Costa Rica's School of Public Health, Medical School, School of Nursing, School of Nutrition, and Health Technology Program. Technical coordination was the responsibility of the PAHO/WHO Representative Office in Costa Rica. Responsibility for the final review, editing, and translation corresponded to the Program on Organization and Management of Health Systems and Services of the Division of Health Systems and Services Development of PAHO/WHO.

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