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**CUBA**  
**PROFILE OF THE HEALTH SERVICES SYSTEM**  
(8, June, 1999)

PROGRAM ON ORGANIZATION AND MANAGEMENT OF HEALTH SYSTEMS AND SERVICES  
DIVISION OF HEALTH SYSTEMS AND SERVICES DEVELOPMENT  
**PAN AMERICAN HEALTH ORGANIZATION**

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## EXECUTIVE SUMMARY

The Cuban constitution defines the country as an independent, sovereign, democratic, and socialist state. From the political-administrative standpoint, the country is divided into 14 provinces and 169 municipalities. In 1998, the Cuban population was estimated at 11,069,245 inhabitants, 77% of which resided in urban areas. The generally downward trend in the economic indicators since 1990 began to reverse itself in 1994, registering a modest 0.7% increase in the gross domestic product (GDP) in 1995, followed by a 7.2% increase in 1996, and 2.5% in 1997. This growth in GDP is a trend that is expected to continue in the coming years. External financial cooperation to the country has been insignificant in recent years, and total annual technical assistance has been on the order of US\$ 20 million, primarily from the European Union and nongovernmental organizations (NGOs). In 1995, the unemployment rate reached 7.9%. At present, 96.7% of the population is literate, with an average of nine years of schooling and no significant differences between the sexes.

The Cuban National Health System is the only health system operating in the country; it is comprehensive, regionalized and decentralized. The National Health System consists of three administrative levels, which mirror the political divisions of the country as well as its levels of health care. Financing for the National Health System is almost completely covered by public funds. The per capita health expenditure in 1997 was \$125.31 Cuban pesos. Almost 92.4% of public health expenditures are financed from municipal budgets. There are 56.8 physicians and 73.7 professional nurses per 10,000 population. There are 6.1 hospital beds per 1,000 population. The national essential drugs list includes 904 products, which must be used by the authorized personnel of the National Health System when prescribing, and to which 100% of the population has access—from both a geographical and economic standpoint. The Cuban Public Health Law stipulates the action to be taken by the State in the area of health in order to protect the health of the citizenry. Accordingly, this law designates the Ministry of Public Health as the steering agency of the National Health System and indicates which services it is to carry out, in addition to determining the functions of local health authorities and the essential public health functions. The only health insurance in the country is provided through the Ministry of Public Health, and covers 100% of the population. All citizens have the right to all health benefits, including those of a more complex nature and involving high technology. The Ministry of Public Health has put a comprehensive strategy for health education and promotion in place, supported the Public Health Law, which requires all National Health Service personnel to engage in health education and health promotion activities. The primary care level, made up of the network of polyclinics, family physician's offices, oral health clinics, maternity homes, and other entities, provides the population with 100% coverage, with family physician's offices serving 97.6% of the population's health care needs (with the remaining 2.4% served by community polyclinics). During 1997, the country's hospitals recorded 19,564,226 patient

encounters. Of this amount, 8,828,295 (45.1%) were outpatient visits, while 10,735,931 (54.9%) consisted of care given at first aid stations. Moreover, 100% of institutions have set up programs to provide the user with better quality service and treatment. By 1996 experts at the Ministry of Public Health, the PAHO/WHO and UNICEF, had conducted an evaluation of 49 maternity hospitals—each delivering between 500 and 1,000 babies per year. As a result of the evaluation, these facilities were certified “mother-and-baby -friendly facilities.”

Health sector reforms have passed through several stages of development. The 1960s were characterized by the creation of the National Health System, the Rural Medical Service, and the polyclinics. The community health care model was introduced in the 1970s, along with community polyclinics. Moreover, during this period, medical education and the health sector were decentralized. In the 1980s the family medicine model was developed. Nevertheless, the impact of the economic crisis on the health situation and public health services, changes at the national level and the new directions the country has pursued since 1989, the ongoing process of state reform, and the difficulties inherent in the development of the National Health System all justify a fresh approach to health sector reform in Cuba. The reforms aim at increasing the quality and efficiency of services and guaranteeing the sustainability of the system, especially in financial terms. Another reform objective is to continue efforts to eliminate small reducible inequalities in the health situation, as well as disparities between different regions and population groups. The strategy gives special priority to health promotion and disease prevention activities, within the context of improving primary care and family medicine, decentralization, intersectoral action, and community participation, as well as the revitalization and improvement of hospital care.

Health sector reform has not involved the restructuring of health authorities, the creation of new regulatory institutions, or changes in regulatory functions, financing, or the delivery of services. What has occurred, however, is a profound transformation in the management process, involving changes in the methods and work styles practiced, strengthening of the grassroots levels, and greater exchange of information with the Ministry of Public Health, and a greater regulatory presence for that agency within the health sector. Also key to the reform process is improved performance and control at the provincial level, as well as the formation of groups of experts to analyze the most pressing problems of the sector and propose solutions. Strengthening the family physician and nurse program and creating the health councils within the framework of current health reforms have generally increased the degree of social participation in the identification and solution of health problems.

## 1. CONTEXT

**Political Context:** The Cuban constitution defines the country as an independent, sovereign, democratic, and socialist state. From a political-administrative standpoint, the country is divided into 14 provinces, 169 municipios and the Isla de la Juventud—a municipio with special status. The “People’s Assemblies” are the maximum authorities of the State at the local level, with members elected by popular vote. The National Assembly is the supreme organ of the State and is the only body with constitutional and legislative power. The National Assembly has standing working commissions in place to control and supervise the activities of respective agencies, such as the Commission on Health, Sports, and the Environment. The National Health System is completely financed by state resources. The system’s budgetary process guarantees compliance with development objectives for the health sector. Budgetary policy is based on an analysis of joint interests and options pursued by the Ministry of Public Health and the Ministry of Finance and Pricing, which are the regulatory agencies for both these activities. The process is carried out in using the methodology established for the preparation of the “Provisional Budget for Budgeted Activity,” which enables health institutions to draw up their budgets and resources to be channeled to the local administration councils. The provisional budget is then discussed and approved by the people’s assemblies, thus guaranteeing the exchange of information among the grassroots and central structures of the health sector. In Cuba, the main problem affecting the performance of the health services is the economic crisis that the country has been facing since 1989, as a result of the breakup of the Soviet Union and the socialist bloc countries, as well as the economic embargo of the country by the United States.

**Economic Context:**

**Economic and Social Indicators, 1991-1997**

Indicator	Year						
	1991	1992	1993	1994	1995	1996	1997
Per capita GNP at constant prices (Cuban pesos)	1,580.1	1,385.8	1,171.6	1,173.8	1,198.8	1,290.0	1,327.0
Total public expenditure as a % of GDP	90.6	94.8	96.5	73.9	63.5	56.2	55.2
Social sector expenditure as a % of GDP	39.2	41.5	42.1	37.5	31.0	32.1	29.7
Total health expenditure as a % of GDP, at current prices	6.4	7.0	7.8	6.1	5.6	5.7	6.0

Source: Min. of Public Health. “Information for the Third Evaluation of the Technical Implementation of Health for All by the Year 2000.”

Beginning in 1990, a general drop in all the economic indicators was observed; most notable was the 34.8% decline in GDP measured through 1993. In 1994, the indicators began to rebound, with a modest increase in GDP of 0.7% in 1995, increasing to 7.2% in 1996, and to 2.5% in 1997. The growth in GDP

is a trend that is expected to continue in the coming years.<sup>1,2</sup> In 1995, the contributions to GDP by sector were: 27.0% manufacturing; 23.0% trade, restaurants, and hotels; 27.0% community, social, and personal services; 6.9% agriculture; 5.6% transport, storage, and communications; 4.0% financial establishments, real estate, and business services ; 3.1% construction; 2.9% electricity, gas, and water; and 1.2% exploitation of mines and quarries.<sup>3</sup> External financial cooperation is insignificant; although in recent years, the total amount has been on the order of US\$ 20 million, mostly from the European Union and NGOs.<sup>4</sup>

**Social Context:** In 1998, the Cuban population was estimated at 11,069,245 inhabitants, 77.1% of which resided in urban areas.<sup>5</sup> With respect to the Human Development Index (HDI), Cuba ranks 85th out of 174 countries, with an HDI of 0.729. According to the Gender-related Development Index (GDI), Cuba ranked 69th, with a GDI of 0.705; in terms of per capita GDP, it ranked 102nd with \$3,100 pesos.<sup>6</sup> In 1995, the unemployment rate reached 7.9%. With respect to the economic crisis, unemployment is seen as an imbalance between the supply and demand for labor, in that 40% of job opportunities are found in the agriculture and livestock sector in rural areas, whereas the available work force is urban and highly qualified. Among the measures adopted to counteract this situation and guarantee employment to all citizens, was the reorganization of the work force along more efficient lines. Accordingly, the policy seeks to distribute personnel in a gradual, controlled manner, linked to business restructuring in the areas of the economy with the greatest need, and moreover, to increase the number of self-employed persons, as well as mixed and cooperative sectors.<sup>7,8</sup> Fiscal measures adopted in recent years and implemented nationwide—such as the elimination of free services and requiring payment for certain services that once were free, and price increases on nonessential goods, as well as the legalization of the possession and use of foreign currencies—have hurt low-income sectors and resulted in social differentiation that was practically nonexistent before these measures were introduced. Despite the difficulties, these measures have managed to ensure free health care and educational services for the entire population, as well as social welfare services for the most vulnerable groups of society. The income coefficient of the top 20% of the population versus the lowest 20% is 3.

Under the Nationalization of Education Law of 6 June 1961, education is the responsibility of the State and all citizens are guaranteed the right to a free education, without distinctions or privileges. In 1996, 96.7% of the population was literate, with an average of 9 years of schooling and no significant differences between the sexes. The remaining 3.3% are persons who are illiterate due to their age or some physical and/or mental health problem.<sup>9</sup>

## **2. HEALTH SERVICES SYSTEM**

**General Organization:** In Cuba, health is considered the key ingredient for quality of life and is seen as a strategic objective in the society's development process. Accordingly, the State assumes full

responsibility for the organization and financing of its citizens' health care, based on the principles of free services and universal access to care. The Cuban National Health System is the only health system operating in the country; it is comprehensive, regionalized, and decentralized. The system consists of three levels, which mirror the administrative divisions of the country. The Ministry of Public Health represents the national level, serving as the steering agency and fulfilling methodological, regulatory, coordination and control functions. Directly under the Ministry are university centers, highly specialized medical research and care institutions, the Union of the Medical-Pharmaceutical Industry and its laboratories, and firms that market and distribute drugs and medical equipment, as well as a state-run company that imports and exports drugs and high-tech medical equipment. The provincial public health offices represent the provincial level, which are under the direct financial and administrative authority of the provincial assemblies. The principal units under the provincial governments are the provincial and intermunicipal hospitals, blood banks, provincial health and epidemiology centers, training centers for health professionals and mid-level health technicians, and the network of commercial pharmacies and optical shops.

At the municipal level are the municipal public health offices, which come under the financial and administrative responsibility of the municipal assemblies. The units overseen include polyclinics; rural, local and municipal hospitals, municipal health and epidemiological units and centers; oral health clinics; social welfare institutions for the elderly and persons with mental or physical disabilities; maternity homes; and other establishments. The nuclei of municipal activity are the People's Councils, which act as an organ for coordination with certain executive authorities, thus giving concrete expression to the concepts of administrative decentralization and public participation in decision-making and in the government of the country.

### **Health System Resources**

**Human Resources:** During the period 1990-1997, human resources in the National Health System continued to increase, achieving a high level of coverage and satisfactory indicators; this progress has been proportional in all the territories. As a consequence of the country's economic depression, at the beginning of the period there was a reduction in staffing in some technical specialties as well as mid-level nursing personnel in the sector. The response was to increase skilled human resources and adopt other strategies of an organizational nature (i.e., ensuring that workers' homes were located near the workplace, introducing flexible working hours, providing transportation to the workplace, etc.), which led to a turnaround in the situation by the end of the period.

**Health Sector Human Resources, 1990–1997**

Resource	Year							
	1990	1991	1992	1993	1994	1995	1996	1997
Total number of physicians	38,690	42,634	46,860	51,045	54,065	56,836	60,129	62,624
Total number of nurses	69,060	71,388	73,943	72,786	71,707	77,339	76,013	81,333
Total number of mid-level laboratory technicians	7,539	7,717	7,727	7,519	7,364	7,059	7,196	7,030
Number of graduates with advanced degrees in public health	129	113	70	43	42	35	28	39
Number of physicians per 1,000 population	36.5	39.9	43.3	46.7	49.3	51.8	54.6	56.8
Number of nurses per 1,000 population	65.1	66.8	68.3	66.6	65.0	70.4	69.1	73.7

Source: National Bureau of Statistics

During 1997 the country had 62,624 physicians, 81,200 nurses, 133 nursing auxiliaries, 61,403 technical professionals, in addition to 134,583 workers employed in other areas of the health sector.

Plans for the education of physicians in the country through the year 2000 were prepared in the mid-1980s and have been reviewed and updated annually. At the beginning of the 1990s, the decision was made to gradually reduce the number students enrolled in medical schools, based on the existing number of physicians and the needs of the system. At present, an adequate number of physicians has been reached; however, the number of nurses still falls short of the desired objective and consequently, education continues to be encouraged for both mid- and high-level nursing personnel.

The government policy of dispatching Cuban health professionals for work assignments abroad is implemented under agreements between the Cuban government and the requesting country. As of March 1999 there were 2,238 Cuban physicians working in other countries.

**Essential Drugs and Other Supplies:** During 1997, the products with the highest demand and their respective wholesale prices (Cuban pesos) were : acetylsalicylic acid, at \$0.0032 ea.; multivitamin tablets, at \$0.0062 ea.; nifedipine 10 mg tablets, at \$0.0069 ea.; tetracycline 250 mg tablets, at \$0.0116 ea.; and diazepam 5 mg tablets, at \$0.0025 ea. The Cuban essential drugs list includes 904 pharmaceuticals, which may be prescribed by authorized personnel of the National Health System and cover 100% of the population, from both a geographical and economic standpoint. There are also subschemes in this regard to facilitate even greater drug access to specific groups or populations with specific health problems. For example, free drugs for pregnant women and patients suffering from tuberculosis, syphilis, blennorrhagia, AIDS, chronic renal insufficiency, and cancer; in addition to cards to monitor patients with chronic diseases such as hypertension, diabetes mellitus, bronchial asthma, etc. Standardized treatment protocols for prevalent pathologies are applied in all institutions.<sup>10</sup> Cuban pharmacies are state-run; most are staffed with a university pharmacist and the remainder, by mid-level technicians with pharmacology degrees.

From 1995 to 1997, 904 pharmaceutical products were marketed annually. Of these, 730 were produced nationally and 174 were imported. All drugs were generic, with no brand-name products in circulation. Figures for total and per capita spending on drugs are not yet available.

**Blood Donations, 1991 - 1997**

Indicator	1991	1992	1993	1994	1995	1996	1997
Blood donations	652,914	637,399	570,689	624,919	563,895	619,863	622,742
Donations per 100 population	6.1	5.9	5.2	5.7	5.1	5.6	5.3
Donations per 100 admissions	43.1	43.6	40.6	44.3	39.3	43.7	43.2

Source: National Bureau of Statistics

**Equipment and Technologies:** There are currently 66,948 hospital beds available in the country (6.1 hospital beds per 1,000 population); 723 clinical laboratories (0.065 laboratories per 1,000 population); 1,844 radiodagnostic units (0.17 units per 1,000 population); 26 blood banks (0.023 blood banks per 1,000 population). Moreover, there are delivery rooms in the 85 general hospitals; 18 in gynecology and obstetrics hospitals; 16 in maternal and infant hospitals; and 64 in rural hospitals.<sup>11</sup> The installed medical equipment in Cuba comes from wide range of sources. In 1989, 3.88% of this equipment was reported to be in a state of disrepair, compared to 5.50% in 1995. Preventive maintenance, which used to be performed on 92.6% of equipment, had declined to 82.0% in 1995. On examining some equipment, it was found that 13% of x-ray and fluoroscopic units were inoperable owing to disrepair, as was 21% of equipment used in cobalt therapy. The percentage of gastroscopes in disrepair was 52%, and that of bronchoscopes, 36%. Moreover, it was found that 19% of ultrasound diagnostic equipment was in disrepair. There are 43 service centers for electrical medical equipment distributed among the 14 provinces and the special municipio of Isla de la Juventud. These service centers are in charge of maintenance and repair and are staffed by engineers and mid-level technicians. High-tech equipment is distributed among the country's 89 intensive care units—35 of them pediatric units—located in the 14 provinces and the special municipio of Isla de la Juventud. In order to meet the country's regional needs, dialysis and kidney transplant units, as well as computed axial tomography equipment, are distributed throughout the western, central, and eastern territories.

**Responsibilities of the System**

**Steering Role :** The Public Health Law defines the role of the State in guaranteeing health protection for the citizenry; determining services that are to be provided by the State through the Ministry of Public Health as the steering agency of the National Health System; establishing the responsibilities of municipal public health offices; and defining the basic and essential functions of the National Health System. Moreover, there is other legislation that bears on the role of the State—for example, environmental laws,

basic sanitation regulations, a decree-law on international health regulations, and laws and regulations governing occupational health and the protection of workers. Intersectoral programs and actions are promoted through the health councils in all jurisdictions of the country. Government officials in the areas of economic and educational policy are in charge of planning and human resources education, which has continued to exhibit a rising trend during the period 1990-1997, providing adequate coverage in all the territories. In this regard, the main difficulties involve financing for the procurement of material resources to implement technical and professional training programs. With respect to educational accreditation in the National Health System, this is an ongoing process and involves the evaluation and reevaluation of standard requirements for professional training programs and their improvement. The process begins with each institution conducting a self-evaluation, requesting pre-accreditation from the corresponding university or faculty of medicine, which in turn issues an opinion. If the opinion is favorable, the request for accreditation is submitted to the National Accreditation Commission. This commission then verifies compliance with established requirements and issues an opinion, which is then forwarded to the Minister of Public Health or to his/her representative for a final ruling.<sup>12</sup> With a view to establishing a steady, uninterrupted process of quality assurance, the system for health facility accreditation is based on external evaluation of established standards in the areas of structure, process, and outcomes. The first step in the process involves a facility's self-accreditation, prior to the evaluation of the corresponding provincial and national commissions. By the end of September 1998, 13 of the 16 hospitals evaluated had been accredited. In addition, accreditation procedures were instituted in the Subsystem of Emergency Primary Care, resulting in the accreditation of 27 municipalities, with an additional 72 municipalities awaiting accreditation; as well as the Integrated Emergency Medical System (SIUM), with 6 accredited provinces. Moreover, the accreditation process for social welfare institutions is under way.<sup>13,14</sup> The Evaluation Department for Education, Science, and Technology is in charge of assessing the impact and operation of new and existing medical technology systems, as well as the medical and surgical procedures used in medical care, adhering to established policies for the preparation, introduction, and use of guidelines on clinical practice.

***Financing and Expenditure:*** Reliable and timely data on the financing of health expenditures are available, prepared by the offices of finance and prices at the different administrative levels of the State. Budgets are then discussed and approved by the people's assemblies and reported to the public health offices. The health sector financial cooperation received by the country is insignificant. During 1995, funds received from the PAHO/WHO, the United Nations Population Fund (UNFPA), the United Nations Development Program (UNDP), and UNICEF, were approximately US\$ 3.0 million, with humanitarian aid of approximately US\$ 20 million annually.<sup>15</sup> Reliable and timely data on health expenditures, prepared by the offices of economy and planning of public health agencies, are discussed in planning and administrative councils at the different administrative levels of the State.

**Health Sector Financing and Expenditures, 1990–1997 (in millions of Cuban pesos)**

Indicator	1990	1991	1992	1993	1994	1995	1996	1997
Budget	1,045.1	1,038.4	1,038.7	1,174.9	1,166.3	1,221.9	1,310.1	1,382.9
Per capita health expenditure	98.56	97.11	95.99	107.57	106.42	111.31	119.03	125.31
Health expenditure as a % of public spending	6.6	6.3	6.6	7.4	7.5	8.0	9.6	10.9

Source: National Office of Economy and Planning, Ministry of Public Health, May 1999.

Financing of the health sector is highly decentralized. With regard to expenditures for public health, 92.4% are financed from municipal budgets. Health sector expenditures exhibit a rising trend: from \$1,045 million pesos in 1990 to \$1,382 million pesos in 1997, for a growth rate of 24.5%. Moreover, the per capita health expenditure increased as a percentage of public spending. Public spending on primary care exhibited a rising trend for the period 1990-1997, with public health expenditures in 1990 of 32.4% at the primary level and 52.7% at the secondary level. For 1994, spending at the primary level rose to 36.1%, with a slight reduction in secondary level spending, which came to 45.2% that year. In 1997, spending at the primary level was reduced to 29.7%, while spending at the secondary level remained relatively unchanged, at 45.6%.<sup>16</sup> Out-of-pocket expenditures assumed by families include drugs prescribed on an outpatient basis; hearing, dental, and orthopedic prostheses; wheelchairs, crutches, and similar devices; as well as eyeglasses. In all cases, the costs incurred by the population are low and subsidized by the State. At present, data on these private health expenditures is not available.

**Insurance:** There is a single health insurance program available in the country, which is administered through the Ministry of Public Health, covering 100% of the population. Accordingly, all citizens have the right to all benefits, including high-tech procedures of greater complexity. Cuban workers employed by semipublic enterprises have the same rights as workers employed by state-run enterprises, with employees of the former having coverage under the family physician and nurse program.

**Service Delivery**

**Public Health Services:** The Ministry of Public Health has a comprehensive strategy of health promotion and education in place, which is backed by the Public Health Law. The strategy requires all personnel of the National Health System to carry out health promotion and education activities. The National Center for Health Promotion and Education (CENPES), together with the provincial centers and municipal departments, are in charge of planning, evaluation, and coordination of health promotion and education programs. Likewise, these organizations provide methodological advisory services to health workers, in order to effectively carry out educational activities. In addition, health councils at the national, provincial and municipal levels, serve as mechanisms for intersectoral coordination, through which representatives of all state agencies can to some degree influence health promotion and education activities. Each health

program has an integral health promotion and education component, including programs developed around: sexually transmitted diseases; personal hygiene; smoking; alcoholism; physical education; oral health, adolescent health; breast-feeding; and health of the elderly. To evaluate these programs, a system of indicators has been developed. These indicators are applied primarily in localities designated as “healthy communities.” Additionally, “rapid” evaluations are made in order to determine the results of campaigns and educational programs. Programs for the early diagnosis of disease include a program for cervical cancer, with over 70% coverage of women aged 25-60 years, for the most part, resulting in 1,023,903 cytologies during 1996, for a rate of 260.9 per 1,000 women in this age group; a breast cancer program, with over 80% coverage of women aged 30 years and up; and other programs, such as those for the early detection of prostate cancer and hypertension. Coverage of the Expanded Program on Immunization (EPI) for children under 1 year of age was 98.5% in 1997; the proportion of children under 1 year receiving the third dose of the DPT vaccine was 99%; 97% for the polio vaccine; and 99% for the BCG and MMR vaccines. Moreover, other specific programs are in place, including those for meningitis type B and C, hepatitis B, typhoid fever, and leptospirosis. Prenatal care and delivery coverage by trained personnel is 100%, with prenatal care available for all pregnant women, consisting on average of 15 prenatal check-ups as well as prenatal diagnosis of birth defects and systematic nutritional surveillance.

***Health Care Services geared to Individuals:*** The data provided by the National Statistical Information System and the Complementary Statistical Information System of the Health Sector, at all system levels, as well as other sources of information, including the health trend analysis units, is considered reliable and timely and is used in administrative decision-making. The Cuban State is the sole health services provider and is represented by the Ministry of Public Health and its subagencies, providing 100% access to the population in both rural and urban areas. In 1987 SERVIMED was created—a state-run enterprise offering health care to tourists and foreigners. SERVIMED is part of the corporate *Grupo Cubanacán* and makes use of the powerful network of the National Health System, in addition to its own “quality of life” and “special” centers. SERVIMED provides medical services for tourists, maintaining offices staffed with a physician in all tourist hotels, 8 clinics in the principal tourist areas of the country, as well as all of the health care units of the Ministry of Public Health. SERVIMED provides health care to foreigners, including all medical specialties and innovative treatments for disease, such as retinitis pigmentosa, vitiligo, psoriasis, and drug addiction. Services include “quality of life” centers, offering thermal baths, stress management, a variety of health services, beauty and aesthetics treatments. In addition, SERVIMED has a chain of nine optical shops and 20 pharmacies and also exports Cuban pharmaceutical products.<sup>17</sup>

***Primary Care:*** The primary care level is made up of the network of polyclinics, family physicians’ offices, oral health clinics, maternity homes, etc., providing coverage to 100% of the population (family

physician's offices provide 97.6% coverage, while the remaining 2.4% of the population is served by community polyclinics).

**Service Productivity, 1997**

Type of service	Number	Rate per 1,000 pop.
Medical consultations and follow-up by a physician	57,738,302	5,231.8
Medical consultations and follow-up by a dentist	19,591,157	1,775.2
Emergency office visits	20,869,423	1,891.0
Laboratory analyses (tests)	51,147,616	4,634.6

Source: National Bureau of Statistics

Productivity in medical care has had exhibited a rising trend that is expected to continue in the coming years. Among the most frequent reasons why patients seek medical care are child growth and development 11.1%; acute respiratory infections (ARI) 8.4%; pregnancy 7.0%; and follow-up visits for outpatients. House calls are programmed in coordination with the medical team assigned to the patient, composed of family physicians and nurses. These teams made a total of 6,564,761 house calls during 1997.

**Secondary Care:** Analysis of the statistical information processed in hospital facilities is used in clinical management, in order to meet the proposed objectives. These objectives include reduced length of hospital stays and fewer admissions, improved productivity operating rooms, increased number of outpatient surgeries and early discharge, etc. During 1997, hospital productivity in the country involved the care of 19,564,226 patients. Of this number, 8,828,295 (45.1%) were seen on an outpatient basis and 10,735,931 (54.9%) at a first aid station.<sup>18</sup>.

**Some Hospital System Indicators, 1997**

Total number of patients discharged	1,441,896
Occupancy rate	70.9
Average length of stay	9.8

Source: National Bureau of Statistics

**Technical Quality:** With regard to aspects related to the quality of hospital care, it should be noted that teaching accreditation programs at different service units and hospitals have served as an indirect indicator for measuring hospital quality, since these programs were instituted in the 1970s as part of the effort to decentralize teaching. At present, 100% of these facilities have quality control programs in place. Each facility has a quality assessment council in charge of monitoring progress. The council is formed by different evaluation committees for the health care process, including those on surgical operations, hospital mortality, drug therapy, tumors, nosocomial infections, resource utilization, and user satisfaction.

With a view to establishing hospital excellence, there are a number of organizational and procedural manuals as well as an accreditation manual, outlining 41 standards and 76 qualitative and quantitative indicators for clinical, surgical, and general hospitals. A full 100% of facilities at the primary level have quality control programs in place, in which quality assessment commissions monitor health care provided to the individual, the family, and the community. All facilities have medical ethics committees in place. Of the total number of deliveries in 1997, the percentage of cesarean sections was 16.2%; the objective was to reduce this rate to 15%. Committees on nosocomial infections are in place in 100% of facilities. In 1997, the rate of these infections was 3.6% among admitted patients. Moreover, 100% of maternal and child deaths are audited.

**Perceived Quality:** A full 100% of institutions have established programs to improve the quality of services and treatment received by users. By 1996, 100% (44) of Cuba's maternal and infant hospitals, delivering more than 1,000 babies annually, and 45% (5) of the 12 hospitals delivering between 500 and 1,000 babies annually, had been evaluated by a team of experts from Ministry of Public Health, PAHO/WHO, and UNICEF, receiving "mother-and-baby-friendly" certification. At present, the program has been extended to the primary health care level and to pediatric hospitals.<sup>19</sup> In addition, there is a movement under way by different sectors of the population to promote awareness in this regard. All health facilities have user satisfaction survey programs in place, as these are of key importance to the country's health strategy. Accordingly, the Health Commission of the Cuban Parliament and the Ministry of Public Health monitor these programs through periodic and comprehensive inspections, which include direct polling of users and, if necessary, scheduling of brief meetings regarding a given problem arising at a given time. District delegates meet twice a year to report to their electorate, where they provide analysis of community health problems. Moreover, arbitration commissions are in place at all health institutions.

### **3.MONITORING AND EVALUATION OF SECTORAL REFORM**

#### **Monitoring of the Process**

**Monitoring of the Dynamics:** More than simply good intentions, Cuban health sector reform has been ongoing since the 1960s and is a fundamental element of the transformations stemming from the revolutionary process. The reforms carried out in the health sector have gone through several eras or stages: the 1960s were characterized by the creation of the National Health System, the Rural Medical Service and the network of polyclinics; during the 1970s, the model of community medicine and community polyclinics were created, and both medical education and the health sector were decentralized; and in the 1980s, the family medicine model was created. The impact of the economic crisis on the health situation and public health services, changes at the national level and new directions the country has pursued since 1989, the process of state reform and the difficulties inherent in the development of the National Health System, are all reasons that justify a fresh approach to health sector

reform in Cuba.<sup>20</sup> The objectives of the Cuban health reform are designed to increase the quality and efficiency of services and guarantee the sustainability of the system, especially in financial terms, and to continue efforts to eliminate small reducible gaps in the health situation as well as disparities between different regions and population groups. The strategy places special emphasis on health promotion and disease prevention activities, within the context of improving primary care and family medicine; the decentralization of services; the intersectoral approach and community participation; as well as the revitalization and upgrading of hospital care. The current health reforms are proposed within the state reform process, taking public opinion into account through social organizations in communities, and centers of study and work.

The contents of the health reform are recorded in the Methodological File,<sup>21</sup> containing the principal objectives of the Ministry of Public Health and are as follows: 1) to improve the efficiency of the National Health System, while respecting the basic strategies (improving the family physician and nurse program, revitalizing the hospital network, revitalizing the National Drug Program, advancing in the areas of traditional and natural medicine; reviving priority programs involving high-technology, and incorporating Cuban medical technology, techniques developed nationally, and other scientific progress with the National Health System); 2) to achieve greater social participation of the sectors and popular organizations in health actions (financing of the sector by other agencies of the economy, expanding the intersectoral approach to health actions, fostering social participation through the consolidation of the health councils); 3) to achieve greater efficiency of and participation by the international community; 4) to promote other basic areas of specialized care (improving the maternal and child health program, improving controls in the communicable diseases programs, developing the program for reducing morbidity and mortality from chronic noncommunicable diseases and comprehensive care for the elderly, strengthening the Health Surveillance System, improving and advancing in activities related to health care financing and preparation of the budget, as well as the monitoring of the health sector workforce with regard to the priority plans of the Ministry of Public Health, designing a system for auditing and control as a part of a comprehensive inspection strategy developed by the Ministry of Public Health in the territories, improving information systems, enhancing the education and training processes as well as continuing education for health professionals and technicians, promoting health research and development and sponsoring scientific symposia at different levels of the National Health System with the requisite quality and scope, and developing a national program on bioethics).

The Methodological File was designed by groups of experts from all areas of the Ministry of Public Health, with health authorities assuming the leadership role in the process of implementation, control, and evaluation of the fulfillment of the program objectives. In order to implement the Methodological File, a plan of action was developed, defining the objectives, responsibilities, timetables for compliance, and evaluation criteria. Periodic evaluations are made at all levels of the system, with the Ministry of Public

Health carrying out two annual inspections of the territories, in order to monitor progress in meeting the objectives. The evaluations conducted thus far have revealed the effectiveness of sectoral reforms as reflected in the improved performance of basic health indicators. Moreover, despite the economic crisis facing the country, there has been greater participation of social sectors and organizations in health actions, continued development of the system of costs and budget indicators for health services, as well as improvements and advances in public health surveillance systems.

### **Monitoring of Reform Contents**

**Legal Framework:** The Public Health Law establishes the general actions that are to be taken by the State in order to guarantee health protection to its citizens and lays out a set of provisions that constitutes the legal body of Cuban public health. Included in this legal framework, among other regulatory actions, are guaranteed health care for the population; commitment to the social character of medical practice; a preventative approach in the delivery of health care; the incorporation of science and technology in health care services; priority for maternal and child care; the practice of organ and tissue transplants; the commitment to the struggle against disease; state sanitary inspections; and health education. In view of the precipitous developments in public health in recent years—characterized by the prioritization of the primary care strategy, the implementation of the family physician and nurse program, the incorporation of high-tech programs, and the need for the country to adapt to changes in the economy—, the existing legal framework of the Public Health Law is no longer adequate. To this end, the country has sought to adopt a new legal framework that reflects these developments: one that will not compromise the basic principles of the National Health System but at the same time will be consistent with the intersectoral approach and expanded community participation. For this reason the Health Commission of the Cuban Parliament, together with the Ministry of Public Health, began to review current legislation, completing the proposal for new legislation by the end of 1998.

**Right to Health Care and Insurance:** The Constitution of the Republic of Cuba guarantees the right of every citizen to health care. This right is explicit, recognized, and exercised by the entire population. Health care coverage is extended to 100% of the Cuban population. Health services include health promotion and education activities, early diagnosis, treatment, and rehabilitation, and the utilization of all diagnostic, therapeutic, and high-tech resources, which are provided to the population with no discrimination whatsoever.

**Steering Role:** The Ministry of Public Health is the steering agency in health and exercises its assigned functions. No structural changes have been introduced with regard to health agencies. Likewise, no new regulatory agencies have been created. Instead, actions are geared toward guaranteeing that information systems generate periodic reports containing pertinent information in order to set priorities, make decisions, and allocate resources at the different decision-making levels of the National Health System.

**Separation of Functions:** There have been no changes in regulatory functions, financing, or the delivery of services. The three-tier administrative structure—national, provincial and municipal—remains in place, as do the four service levels (the former plus the area of health). These levels are responsible for policy formation, financing, assurance and delivery of public services. Accountability for the system is achieved through the administrative councils, which are responsible for coordination, supervision and control.

**Decentralization:** There have been no changes in the decentralization procedures of health service systems. Responsibilities, spheres of competence, and resources are decentralized to the provincial and municipal levels of the system, guaranteeing local jurisdictions the ability to respond effectively to the demands and needs of each community. Over the last period, decentralization has been enhanced at the local level by emphasizing the process of municipalization.

**Social Participation and Control:** Social participation in health management constitutes one of the objectives of health sector actions. In order to maximize social participation, health councils have been created in the different agencies to address the problems identified in the diagnoses of the health situation, and to draft plans of action and plan intersectoral solutions locally. The health councils are presided over by the highest authority of the health sector and are made up of representatives from other sectors and organizations that participate in the health management process. The administrative councils at each level support community work through the commissions on health, athletics, and the environment.

**Financing and Expenditures:** Health financing highly decentralized, as municipal budgets account for 92.6% of the financial resources for public health expenditures, which in turn, allocate the majority of these to the area of public health. At the same time, other methods are designed to capture external monetary resources, with a view to promoting self-financing of the health sector through foreign currency financing. These external sources include income from drug exports, health care for foreign patients in Cuban medical institutions, technical assistance provided by Cuban medical specialists abroad, training courses and specialized education for foreign professionals and technicians, and marketing of publications and other scientific outputs.

**Supply of Services:** New health care components have been introduced, such as outpatient surgery, early discharge, and house calls. Referral and back-referral systems have been strengthened, performing systematic analysis of qualitative and quantitative indicators, which help assess situations and make timely decisions. New services have been incorporated into the National Health System, including the Subsystem of Emergency Primary Care, the Integrated Medical Emergency System, and the Centers for the Advancement of Natural and Traditional Medicine. Moreover, medical records are kept on the population, which means that all risk groups are identified.

**Management Model:** There has been a profound transformation of the health management model, resulting from changes in methods and approaches to work. These changes have served to strengthen the grassroots level, promote a greater exchange of information and increased regulatory presence of the

Ministry of Public Health, foster improved program implementation and control in the provinces, and enhance the expertise of actors to identify priority problems in the sector and propose solutions. The health councils are important actors in the development of this strategy. In order to ensure that all citizens have an equal right to health care, there are no plans for privatization, additional insurance systems, or new expenditures that families would have to cover. Thus, there is insistence on the principle that the State should continue to finance health and maintain universal coverage and access to health care services.

**Human Resources:** With a view to improving the basic program of physician training, several new components have been introduced, including education in disease prevention and health promotion, which will enhance performance when these students become family physicians. Professional practices have been developed with a multidisciplinary orientation, including comprehensive general medicine, comprehensive dental care, and general nursing. Moreover, a system has been developed to provide incentives for improving the performance of health personnel. In addition to academic credits, the system includes components to evaluate competence as well as professional and technical performance, which makes it possible to identify training needs and develop training methods. Likewise, master's level courses have been created, including the areas of public health, primary care, environmental sanitation, epidemiology, traditional and natural medicine, health technology, etc.

**Quality and Health Technology Assessment.** The National Department of Technological Assessment was created in January 1996 to determine the impact and scientific viability of health technology in existing systems and identify the equipment that may be incorporated. This department has established a network of reference centers for the evaluation of products and diagnostic/therapeutic procedures (Centers of Drug Surveillance). Moreover, other national centers have been created, including the State Control Center for Drug Quality, established to certify the quality, safety, and efficiency of pharmaceuticals and diagnostic methods; the State Control Center for Medical Equipment, in charge of the control, evaluation, and registration of medical equipment and instruments; and the Coordinating Center for Clinical Trials. These centers evaluate health technologies during the implementation phase and then monitor them thereafter, in addition to establishing mechanisms for monitoring expected results.

### **Outcome Assessment**

Health reforms initiated in the last period have contributed significantly to improvements in the sector with regard to the implementation, control, and evaluation of the contents of the Methodological File. These reforms are designed to increase the quality of medical care, improve health indicators, increase economic efficiency of the National Health System, increase the level of satisfaction among the population, and improve the performance of health personnel. Incorporated in five strategies and four programs, these reforms still face challenges that have yet to be resolved. Accordingly, the principle tasks of the Ministry of Public Health in 1999 are geared at meeting these challenges. Included in these tasks

are improving the system of household income; consolidating the work of the health councils and healthy communities; strengthening the management efficiency and accreditation programs; eliminating waiting lists for surgical procedures; reducing the length of hospital stays; improving the system of academic credits; reducing the number of vacant hospital beds in the country to no less than 10%; increasing foreign currency income through a variety of measures; guaranteeing the training of human resources and others of an organizational character at the primary care level, implementing the strategy of comprehensive municipalization of the National Health System; and increasing the population's level of satisfaction with the health system.

### **Equity**

***In Coverage:*** Cuba is the most advanced country with regard to health equity, ranking number one, given the country's high transfer of limited available resources to the health sector.<sup>22</sup> A full 100% of the population is covered by the health services. Coverage of the Expanded Program on Immunization (EMI) for children aged under 1 year of age in 1997 was 99% for the DPT 3, BCG, and measles vaccines; 100% for prenatal care and delivery by trained personnel; and 70% of women use contraceptives.<sup>23</sup>

***In Distribution of Resources:*** Per capita health expenditures in 1997 amounted to \$125.31 pesos; there were 56.8 physicians and 73.7 professional nurses per 10,000 population; and 6.1 hospital beds per 1,000 population.<sup>24</sup>

***In Access:*** In Cuba, no deaths occur for lack of medical care. All patients are able to seek same-day care in a family physician's office. These offices have flexible hours, which reduces access barriers to care that may result from fixed office hours. The rural population is covered by the family physician and nurse program, with offices located in those communities. Waiting lists for surgical procedures were reduced from 20,815 patients in January 1998 to 11,439 patients by January 1999 (45.04% reduction). In order to achieve this reduction, multidisciplinary groups were formed at the hospital, provincial, and ministerial levels, made up of representatives from medical facilities, INSUME (state-run medical supply company) and the IMEFA (state-run pharmaceutical company). These groups were formed to guarantee the necessary resources and carry out systematic controls on activities to increase the number of surgical procedures and improve productivity per operating room.<sup>25</sup>

***In Resource Utilization:*** In 1997, there were a total of 5,231.8 outpatient visits per 1,000 population, 13.1 discharges per 1,000 population, and 100% of deliveries were attended by trained medical personnel.<sup>26</sup>

### **Effectiveness and Quality**

***Effectiveness:*** Infant and maternal mortality rates have declined in all the territories. National figures for 1997 include infant mortality of 7.2 per 1,000 live births; maternal mortality of 2.16 per 10,000 live births; and a low birthweight index of 6.9%. Moreover, there were 365 deaths from cervical cancer, for a rate of 6.6 per 100,000 women.<sup>27</sup> During 1995, the incidence of HIV/AIDS was 10.6 per 1,000,000 population.<sup>28</sup> In 1997, there were no reported cases of rubella, measles, poliomyelitis, diphtheria, or

whooping cough; a single case of tetanus was reported in an adult patient; there were 1,346 reported cases of tuberculosis, 139 less than the previous year, with no reported cases of tuberculous meningitis; there were 2,019 deaths from diabetes (mortality rate for diabetes mellitus was 18.4 per 100,000 population).

**Technical Quality:** All health facilities at the primary and secondary levels have quality control committees in place. Whenever they are available in the country, essential drugs are dispensed at primary and secondary health facilities in all the territories. The incidence of nosocomial infections was 3.6% with respect to the total number of admitted patients. Discharge reports are included in the outpatient clinical histories for 100% of patients.

**Perceived Quality:** Users have the option of seeing a family physician other than the one assigned, or a physician from another level of care if they so choose. All health institutions have programs in place to improve the quality of care and treatment received by the user. To this end, users complete surveys indicating their perceptions of the care received. A sample survey conducted by the National Health Trend Analysis Unit (UATS) in December 1997. The survey, which included sample representatives of the population from each province, was designed to evaluate user satisfaction with the health services. Accordingly, 46.6% of those surveyed expressed dissatisfaction with the services for the following reasons, in order of importance: difficulties with instruments and equipment; lack of reagents, prescription medicines and/or others; lack of essential drugs; uncomfortable and deficient physical conditions of facilities; and to a lesser extent, difficulties with treatments and discourteous personnel. Similar surveys are carried out semiannually. Moreover, a user satisfaction surveillance system is being implemented that will conduct surveys biweekly.

### **Efficiency**

**In Resource Allocation.** The greatest proportion of the health sector budget is spent on the public health services. The percentage of total health sector spending on primary health care has increased, while spending on hospital care has decreased. Improving hospital efficiency is one of the objectives of the health sector. To this end, efforts have been made to reduce the length of hospital stays to a minimum, decrease hospital admissions, and increase the number of outpatients and improve operating room productivity. In the first half of 1998, the aforementioned indicators were as follows: the average stay in surgical hospitals was 10.9 days, just over the objective of between 8 and 10 days; the average stay in general hospitals was 7.4 days, meeting the objective of between 6 and 8 days; and the average stay in pediatric and obstetric hospitals was 5.5 days, meeting the objective of between 5 and 6 days. Also in 1997, hospital admissions declined by 2.0% and 164,213 outpatients were admitted, increasing to 279,289 outpatients in 1998. With regard to improved productivity in major surgical procedures per room based on an 8-hour workday, nine provinces were successful in meeting the desired indicator, averaging between 4 and 4.5 surgical procedures per room; three averaged between 3 and 4 per room, and only two below 3

per room. In 1998, there were 894,505 surgical operations performed, of which 851,910 were foreseen in the planning (105% productivity).

**Sustainability:** The current renewal of the National Health System, emphasizing municipalization, has provided the solution to many health problems at the municipal level, through the active participation of the different political and social organizations, administrative agencies, and the State. New methods for the capture of external monetary resources have been developed, through drug exports, health care for foreign patients, technical assistance abroad, training courses and specialized education, and special projects.

**Social Participation:** The strengthening of the family physician and nurse program and the creation of the health councils, within the framework of the current health sector reforms, have fostered greater social participation in the identification and solution of general health problems.

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