

HEALTH SYSTEMS PROFILE NICARAGUA

MONITORING AND ANALYZING HEALTH SYSTEMS CHANGE

(Third Edition)
May, 2008

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List of Acronyms

ADDs	Acute Diarrheal Diseases
AMUNIC	Association of Municipalities of Nicaragua
ARIs	Acute respiratory infections
BCN	Central Bank of Nicaragua
CBEC	Basic Set of Coverage Expansion
CIMED	Pharmaceutical Drug Information Center
CNM	National Micronutrient Commission
CONALAMA	National Breastfeeding Commission
CONAPA	National Water and Sanitation Commission
CONAPINA	National Advisory Board for Comprehensive Care and Protection of Minors
CONARE	National Rehabilitation Board
CONASAN	National Food Security Commission
CONISIDA	Nicaraguan AIDS Commission
CONPES	National Board of Socioeconomic Planning
COSEP	Superior Council for Private Enterprise
COTESAN	Technical Commission on Nutrition and Food Security
CPV	Population and Housing Census
CRA	Autonomous Region Council
DGA	Bureau of Customs
DGAF	Demographic and Financial Department
DGI	Bureau of Internal Revenue
DGPD	Planning and Development Department
DHS	Nicaraguan Survey of Demography and Health
ECACS	Strategy of Communication and Community Action for Health
EMPs	Medical Service Provider Corporations
ENACAL	Nicaraguan Water and Sewer Authority
ENAP	National Port Authority
ERCERP	Enhanced Strategy of Economic Growth and Poverty Reduction
FIDEG	International Foundation for Global Economic Challenge
FISE	Social Emergency Investment Fund
FNI	Nicaragua Investment Finance Corporation
FONMAT	Fund for Safe Motherhood and Childhood
GDP	Gross Domestic Product
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome
IMCI	Integrated Management of Childhood Illness
INAA	Nicaraguan Water and Sewer Institute
INDIE	Nicaraguan Institute of Information for Development
INEC	National Institute of Statistics and the Census
INETER	Nicaraguan Geosciences Institute
INIFOM	Nicaraguan Institute of Municipal Development
INIM	Nicaraguan Institute of Women
INSS	Nicaraguan Social Security Institute
INTA	Nicaraguan Institute of Agricultural Technology
LSMS	Living Standards Measurement Study
MAGFOR	Ministry of Agriculture and Forestry
MAIS	Comprehensive Health Care Model
MARENA	Ministry of the Environment and Natural Resources
MECD	Ministry of Education, Culture, and Sports
MHCP	Ministry of Finance and Public Credit
MHDI	Municipal Human Development Index
MIFAMILIA	Ministry of the Family
MIFIC	Ministry of Industry and Trade Promotion
MIGOB	Ministry of Government

MINSAs	Ministry of Health
MITRAB	Ministry of Labor
MTI	Ministry of Transportation and Infrastructure
NGOs	Nongovernmental organizations
PAHO	Pan American Health Organization
PBSS	Basic Package of Health Services
PHC	Primary health care
PMSS	Program of Health Sector Modernization
PNCU	Prenatal check-up
PND	National Development Plan
PNDH	National Plan for Human Development
PNS	National Health Plan
PROCOSAN	Community Health and Nutrition Program
RAAN	North Atlantic Autonomous Region
RAAS	South Atlantic Autonomous Region
RNC	Noncontributory Regimen
SECEP	Presidential Coordination and Strategy Secretariat
SEJUVE	Youth Secretariat
SIAFI	Integrated System of Financial Administration
SIGFA	Integrated Financial and Administrative Management System
SILAIS	Comprehensive Local Health System
SIMINSA	Information System of the Ministry of Health (production of health services)
SINAPRED	National Disaster Prevention System
SINEVI	National System of Vital Statistics
SINIA	National Environmental Information System
SIPLA	Planning System (Ministry of Health)
SISNIVEN	National Nutrition Status Surveillance System
SIVIN	Epidemiological Surveillance System
SNIP	National Public Investment System
STIs	Sexually transmitted infections
SWAp	Sector-wide Approach for Health
TB	Tuberculosis
TFR	Total fertility rate
UCRESEP	Public Sector Reform Coordination Unit
USAS	Accredited Health Units
VPDs	Vaccine-preventable diseases
WCBA	Women of childbearing age
WFP	World Food Program
WHO	World Health Organization

Executive Summary

In 2005, the population of Nicaragua was 5,142,098 (CPV 2005), of which 49.3% was male and 50.7% female. With respect to the total population, 56% resides in urban areas and 57% in the Pacific region. Some 8.6% of the total of population self-identifies as belonging to a specific indigenous group or ethnic community.

According to data of the last three censuses, Nicaragua's population growth rate declined from 3.5% in the period 1971-1995 to 1.7% in the period 1995-2005. Life expectancy at birth for the period 2000-2005 has increased 1.5 years over the previous 5-year period, and is currently estimated at 70.82 years. Diseases of the circulatory system, external causes, and tumors account for the three leading causes of death. Rates of maternal and child mortality and specific morbidity due to communicable diseases, such as diarrheal, respiratory, vector-borne, and sexually-transmitted diseases (including HIV/AIDS), continue to be high. Moreover, morbidity and mortality associated with chronic diseases and external causes are increasing.

Poverty is the main social determinant of the population's health status. Nicaragua continues to be the second poorest country of Latin America. In 2005, the estimated general poverty rate is 48.3%, while an estimated 17.2% of the population lives in conditions of extreme poverty. Of the working-age population, 52.4% is active in the job market.

The General Health Law accords responsibility for the steering role of the health sector to the Ministry of Health (MINSa), which is in charge of coordinating, organizing, supervising, inspecting, controlling, regulating, and monitoring health activities. The National Health Plan 2004-2015 clearly defines the scope of national health policy.

The General Health Law and its Regulations establish the various regimens and plans that guarantee health care coverage and access. The Ministry of Health is the agency responsible for guaranteeing people's access to the different regimens and protecting the right of the users to be informed and receive quality care.

MINSa is the primary supplier of health services. Its services network targets the first and second levels of care. The services offered by the Military Health and Ministry of Government Health Networks are primarily curative in scope and these networks provide services to their active members and families. They also offer health care to insured members through the network of Medical Service Provider Corporations (EMPs).

The estimated care coverage rates of the country's health institutions are: MINSa (60%); Nicaraguan Social Security Institute or INSS (7.7% beneficiaries and their family members); Ministry of Government and Military Health networks (8%); and private institutions (4%). Most of the population supplements MINSa health care with service providers of the private sector and NGOs. Not all INSS beneficiaries are covered by the comprehensive system, which includes disease and maternity coverage. In 2006, 12.6% of INSS beneficiaries received benefits exclusively from the INSS fund for disability, old age, and death.

Human resources education for the health sector is carried out by teaching institutions. Generally, these programs are supervised by public and private university centers. MINSa has a collective bargaining agreement that establishes the duties and rights of employers and employees, thus guaranteeing the participation of workers through their union representatives in all budgetary formulation, execution, monitoring, and control activities.

MINSa has a list of essential drugs and reviews its contents every two years. The drugs are listed by their generic names. INSS also has a mandatory list of basic drugs that EMPs must offer their beneficiaries. The inventory of equipment at the first level of care fails to meet user demand for these services. At the second level of care serious obstacles hinder efforts to maintain existing equipment, including a lack of qualified equipment maintenance personnel.

The General Health Law and its Regulations mandate implementation of a quality assurance system. For this purpose, preventive/corrective medical audits are performed. Additionally, periodic external user satisfaction surveys are administered.

In 1991, MINSA initiated a reform of its health services management model, with a view to decentralizing care by region and health districts. The objective of this reform was to adapt the management model to the Comprehensive Local Health Systems or “SILAIS” approach. For the most part, SILAIS is based on political-administrative divisions at the departmental and municipal levels, except for the two autonomous regions—North Atlantic (RAAN) and South Atlantic (RAAS) Autonomous Regions—and two departments. The SILAIS approach serves as an intermediate level of coordination between the central administration and health service provider establishments.

Citizen participation in health sector management is one area being strengthened at the national level through the National Health Council, but with greater emphasis at the local levels. Working through SILAIS, health councils have been formed and include a high degree and wide range of citizen participation—based on the specific characteristics of each department and the two autonomous regions of the Atlantic—and also include the participation of governmental delegations from a number of public institutions, in accordance with the provisions of the General Health Law.

Since 2007, with the election of the Government of Reconciliation and National Unity, democratic governance has been promoted through legitimate processes of citizen participation and the reinstatement of citizen rights, based on a culture of active citizenship. Accordingly, the objective is to encourage profound societal changes by fostering society’s awareness of its ability to exercise power and promote ethical and moral values; the cornerstones for comprehensive human development.

1 Context of the Health System

1.1 Health Situation Analysis

1.1.1 Demographic Analysis

Nicaragua is a multiethnic, multicultural country comprised of 15 departments and two autonomous regions. The country can be subdivided into three broad geographical regions: the Pacific region, characterized by an elevated degree of ecological risk and a high population density of 152 inhabitants per km² (e.g., Managua has 398 inhabitants per km², in contrast to the national average of 45.8 per km²); the predominantly rural Central region, with its agriculture-based economy, limited highway development, and population density of 48 inhabitants per km²; and the Atlantic region, comprising 46% of the national territory, most of which is rural or jungle, with a low population density of 10 inhabitants per km², an older indigenous population, low rates of schooling, limited road access, and is effectively isolated from the rest of the country.

According to data from the last three censuses, Nicaragua's population growth rate declined from 3.5% in the period 1971-1995 to 1.7% in the period 1995-2005. The country has a population of 5,142,098 (CPV 2005), of which 49.3% is male and 50.7% female or 97.2 males for every 100 females. Of the total population, 56% is urban and 44% rural. The population is concentrated in the Pacific region, which accounts for 57% of the total population, as compared to 31% in the Central region, and 12% in the Atlantic region.

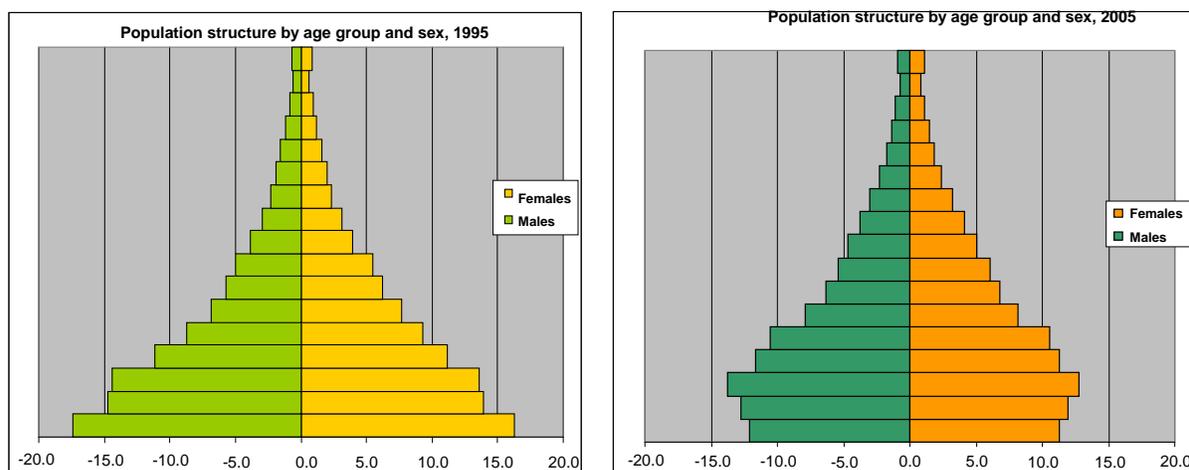
According to the 2005 census, 8.6% of the population self-identifies as belonging to a specific indigenous group or ethnic community. Noteworthy, however, is that 11% do not know to which ethnic group they belong, and if those who are unaware of any ethnic affiliation are included, this figure approaches 15% of the total of this population. Ethnic groups include the Miskitu (27.2%); mestizos of the Caribbean coast (25.3%); Chorotega-Nahua-Mange (10.4%); Creole (Kriol) and Xiu-Sutiava (4.5% each); Cacaopera-Matagalpa (3.4%); Naho-Nicarao (2.5%); and Mayangna-Sumu (2.2%). These populations are largely rural (56.8%) with different customs according to the indigenous population or ethnic community in question. The Creole population has a large urban presence (90.5%); followed by the Xiu-Sutiava (80.4%); and the Garifuna and Ulva (62% each).

Changes in the distribution of the population by age groups between the last two censuses (1995 and 2005) show that the dependent population under age 15 declined from 45.1% to 37.3%. The working-age population (between 15 and 64 years) increased from 51.4% to 58.4% of the total population, while the relative proportion of the elderly population also increased from 3.5% to 4.3%, indicating a decline in the dependency ratio from 95% to 71%. A number of studies point out that the age structure of the population impacts development, inasmuch as a high proportion of dependent family members hinder economic growth.

Women of childbearing age (WCBA) represent 49% of the total female population; 14% are illiterate, and only 10% receives some degree of higher education. One out of four adolescent women in the 15-19 years age group is already a mother or pregnant, accounting for 18% of all pregnancies. According to the Nicaraguan Demographic and Health Survey (ENDESA) 2006-2007, fertility rates by age group reveal an average total fertility rate (TFR) of 2.7 children per woman nationwide. This figure varies by department and level of access to education. In urban areas the TFR approaches a population replacement rate of 2.2 children per woman, while the corresponding figure for rural areas is 3.5.

The acceleration of the demographic transition in Nicaragua is marked by changes in the growth and age structure of the population, and by a reduction in the dependency ratio, due to the rapid decline in fertility (4.9 children per woman in 1995 to 2.9 in 2005). This decline, together with intense international emigration flows, are the main causes of the drastic reduction in the annual average rate of population growth. Nevertheless, in absolute terms, the population continues to increase at an annual average rate of 80,000 inhabitants.

**Figure 1. Population structure by age group and sex
Nicaragua, 1995 and 2005**



To get the most benefit from this opportunity—the largest population cohort of reproductive age in the nation’s history—it will be necessary to secure adequate and well-targeted investment flows as well as formulate public policies to foster conditions for local development and enhance human capital, while at the same time, lay the foundations of a formal labor market that can absorb the growing workforce, and thus expand the tax base. Otherwise, that opportunity can become a social cost with serious consequences for governance, due to high levels of unemployment, citizen insecurity, and of massive emigration abroad.

In Nicaragua, the productive infrastructure tends to be concentrated in urban areas. Some 43.4% of the total population resides in 30 cities of over 15,000 inhabitants and accounts for more than two-thirds of the country’s GDP, whereas the agricultural sector contributes less than 20% of GDP.¹ In these cities, service coverage levels surpass national averages and there is less poverty. This urban system still presents gaps: in its connectivity; interactions between rural and urban areas and between cities; and in its capacity to supply basic social services, especially to meet the needs of immigrants. The rural population is large (44%) and lives in dispersed small settlements, marked by significant gaps, limited economic potential, scant opportunity for productive employment, as well as high rates of marginalization, extreme poverty, and environmental risk.

Emigration has intensified in recent decades. According to estimates, more than 10% of the population resides outside Nicaragua. A number of factors impact this migration: (i) the historical pattern of the population’s mobility; (ii) greater population growth than economic growth; (iii) the persistence of poverty and social deficits; (iv) disparities in access to health care, education, and employment; (v) insufficiency of the labor market to absorb young people entering the workforce; and (vi) a culture and tradition of emigration encouraged by family networks, which increase and legitimize the reasons and opportunities for migrating.

Some 15% of households report at least one family member living permanently abroad (approximately 1 in 7).² However, this situation is not consistent across regions.³ Overall, the population of the Pacific region is eminently urban, with relatively high educational status, and a

¹ United Nations System. Nicaragua. “Common Country Assessment”. Managua, 2 February 2007.

² EMNV, 2001.

³ Among the Pacific region, excluding Managua (with 32% of all households), 45% of households report one family member living abroad; the corresponding figure for the Central region (30% of all households) is 18.7%, and 17% of households in metropolitan Managua.

greater proportion of non-poor households. The three leading destinations of Nicaraguan migration are Costa Rica (52.9%); the United States (34.5%); and Canada and Europe (12%).

By sex, the proportion of migrants is similar, although in recent years outbound migration flows have included more women and young people. Gender plays a significant role: on average, 31% of the country's households are headed by women, whereas 46% of migrant households have a female head-of-household. Furthermore, this trend is observed more among urban (46%) than rural (30%) households.⁴

**Table 1. Population distribution by gender
Nicaragua: Selected 5-Year Periods**

Period/Indicator	1990-1994			1995-1999			2000-2005			2005-2010		
	Total	Men	Women									
Total population (thousands)	4,137	2,064	2,073	4,658	2,320	2,338	5,098	2,538	2,560	5,450	2,707	2,743
% urban population	53.7	52.2	55.1	54.4	52.6	56.2	55.2	53.3	57.0	55.9	54.0	57.8
Indigenous population (thousands)	ND	ND	ND	ND	ND	ND	ND	ND	ND	444	222	222
% population under 15	46.0	46.7	45.3	44.0	44.8	43.1	40.9	41.8	40.0	37.8	38.8	36.9
% population 60 and older	4.8	4.4	5.3	5	4.7	5.4	5.4	5	5.7	5.9	5.6	6.2
% annual growth rate of the population	2.373	2.342	2.404	1.807	1.796	1.817	1.337	1.290	1.383	1.297	1.226	1.366
Total fertility rate (children/woman)	-	-	4.5	-	-	3.6	-	-	3.00	-	-	2.76
Crude birth rate per 1,000 population	-	-	35.43	-	-	30.14	-	-	26.28	-	-	24.87
Crude death rate per 1,000 population	6.50	-	-	5.58	-	-	5.04	-	-	4.77	-	-
Life expectancy at birth (in years)	66.05	63.53	68.7	68.41	65.89	71.06	70.82	67.97	73.82	72.89	69.91	76.02
Migratory balance (thousands)	(114)	(63)	(51)	(158)	(82)	(76)	(206)	(110)	(96)	(200)	(110)	(90)

Source: Nicaraguan Information Institute for Development (INIDE).

1.1.2 Epidemiological Analysis

Life expectancy at birth for the period 2000-2005 has increased 1.5 years over the previous 5-year period, and is currently estimated at 70.82 years. The crude death rate has declined from 5.6 in the period 1995-1999 to 5.04 in 2000-2005. Mortality is higher for males in all age groups than for females. People over age 65 and children under 1 have the highest specific mortality rates.

Diseases of the circulatory system, external causes, and tumors account for the three leading causes of death. Rates of maternal and child mortality and specific morbidity due to communicable diseases, such as diarrheal, respiratory, vector-borne, and sexually-transmitted diseases (including HIV/AIDS) continue to be high. Moreover, morbidity and mortality associated with chronic diseases and external causes are increasing.

Data from ENDESA 06/07 indicate that child malnutrition continues to be high. Some 20.4% of children under 5 suffer from chronic malnutrition and 5.1% from severe chronic malnutrition.

⁴ International Foundation for Global Economic Challenge (FIDEG), 2005.

Children living in the RAAN, Jinotega, Madriz, and Matagalpa are most affected. Some 22.7% of children under 5 with chronic malnutrition live in rural areas and 10.6% in urban areas.

According to the 2005 National Household Living Standards Survey (LSMS), diseases of the respiratory system were reported as the leading cause of morbidity (38.2% of interviewees reported feeling sick within the last 30 days). The risk of death from acute respiratory infection increased from 10.6 per 100,000 population in 2002 to 12.0 in 2005. The overall risk of death declined from 5.2 per 100,000 population in 2002 to 4.4 in 2005.

**Table 2: Morbidity and risk factors
Nicaragua: 1995-2005**

Periods/Indicators	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Prevalence of low birthweight	8.7	8.9	8.8	9.0	8.7	8.2	8.2	8.3	8.4	8.5	8.4
Adolescent fertility rate (15-19 years)	ND	ND	ND	139	ND	ND	119	ND	ND	ND	106
Annual prevalence of moderate to severe nutritional deficiency in children under 5	ND	ND	ND	24.9	ND	ND	20.2	ND	ND	ND	ND
Prevalence of exclusive breastfeeding during the first 120 days of life	ND	ND	ND	29.5	ND	ND	39.3	ND	ND	ND	ND
Percentage of births assisted by skilled health personnel	68.0	68.9	71.3	69.2	71.9	73.3	73.4	73.7	75.2	77.2	79.8
Annual number of confirmed cases of immunopreventable diseases	458	344	355	2,604	1233	402	242	142	107	70	48
Annual number of confirmed cases of dengue	ND	ND	ND	2,618	1,683	1,009	2,661	2,310	2,940	1,097	1,915
Annual number of confirmed cases of malaria	71,380	76,269	51,858	34,146	38,327	23,878	10,498	7,695	6,717	6,897	6,642
Annual incidence of TB	69	70	63	54	51	47	48	39	42	39	35
Annual incidence of positive sputum-smear TB microscopy	38	40	38	34	31	29	28	25	26	24	23
Annual incidence of HIV/AIDS	1.15	1.20	1.30	1.34	2.18	2.50	3.25	3.57	4.12	6.70	7.67
Ratio of HIV/AIDS cases (male/female)	1.7/1	4.8/1	3.2/1	3.2/1	4.5/1	3.1/1	2.5/1	2.3/1	2.2/1	2.2/1	2.4/1
Annual incidence of malignant pulmonary neoplasms	61	57	64	70	73	75	65	77	89	77	62
Annual incidence of malignant breast neoplasms in women	352	423	279	239	330	386	379	374	408	468	443
Annual incidence of malignant cervix neoplasms	1,489	1,636	1,527	1,405	1,543	1,688	1,731	1,724	2,211	2,221	2,227

Source: Ministry of Health, Bureau of Statistics.

Data were not reported by urban/rural area; no data were reported on the annual incidence of influenza infections.

Malaria incidence has been on the decline. Malaria cases are currently concentrated in 36 high-risk municipalities where 26% of the country's population resides. These are located along the Atlantic coast, Chontales, Matagalpa, Jinotega, Nueva Segovia, and Chinandega. The risk of malaria reemergence is very high in the Pacific region and San Juan River basin, which could have a negative impact on tourism development projects in these areas. Mortality from malaria remains a problem in the autonomous regions.

Dengue transmission pattern is both endemic and epidemic in the country. There are annual outbreaks, but they remain below the national rates observed in the 1990s. Dengue cases occur throughout the country, which is at risk for outbreaks of dengue hemorrhagic fever. Noteworthy, however, is that no deaths due to dengue were confirmed between January and November 2006.

The various clinical forms of leishmaniasis are also on the rise; the number of reported cases has tripled over the last ten years. Some 82% of leishmaniasis cases are concentrated in Jinotega and Matagalpa. Despite problems associated with the reporting of Chagas disease, recent studies of schoolchildren ages 7-14 (2000-2003) in 15 departments have revealed a high incidence of blood-positive cultures, including 10.8% and 4.3% for Madriz and Nueva Segovia, respectively.

Tuberculosis remains endemic with a declining incidence: from 88 per 100,000 population in 1987 to 39 in 2004. However, incidence rates are persistently high in the autonomous regions (RAAN, 110 per 100,000 population; RAAS, 59 per 100,000 population).

Incidence of HIV/AIDS among the general population remains low at less than 1%; however, the possibility of underreporting cannot be discarded. Annual incidence has increased from 2.50 per 100,000 population in 2000 to 7.67 in 2005. Sexual activity remains the main mode of transmission (92%), primarily through heterosexual relations (73% of the total). Among the heterosexual HIV-positive population, the proportion of HIV-infected women has increased from 31% in 2000 to 37% in 2005. The prevalence rate approaches 9% among men who have sex with men. There is a lack of knowledge regarding protection and risk factors, especially among the lower-income populations.

Vaccine-preventable diseases remain under control. In 2005, the country made significant headway in eliminating measles, rubella, and congenital rubella syndrome through the National Measles and Rubella Vaccination Campaign. However, over the period 2000-2005, a gradual reduction in vaccination coverage rates was observed. This situation is not strictly due to problems associated with population estimates, since reductions were also observed in the total number of applied doses of tuberculosis vaccine (BCG); measles, mumps, and rubella vaccine (MMR); and in coverage with the third dose of oral poliovirus vaccine (OPV) and pentavalent vaccine (DPT+Hep-B+Hib). Noteworthy is Nicaragua's commitment to its national immunization program. The government has largely taken responsibility for program vaccines and supplies procurement using state resources.

The prevalence of disability in Nicaragua is estimated at 10.25% of the population over age 6, and is highest among females. With regard to mental health problems, neuroses and substance abuse problems are the leading reasons for medical consultations. The frequency of suicide attempts has been on the rise, particularly with phosphine containing pesticides as a method.

Data from ENDESA 2006-2007 indicate that 47% of women have been victims of verbal violence; 27% of physical violence; and 13% of sexual violence throughout their lives. Of these women, 32.6% are from urban and 25.1% from rural areas.

According to MINSA's health statistics system, in 2004 injuries accounted for 18% of all emergency consultations. These included falls (35%), physical violence, traffic accidents (12%), stabbings (12%), poisonings (3%), burns (2%), and gunshot wounds (1%).

Occupational diseases and work-related accidents are vastly underreported, inasmuch as the Ministry of Labor (MITRAB) and the INSS have only partial registries (6% and 17% coverage of the working population, respectively). Workplace accident rates in 2004, according to MITRAB and INSS, were 4.8% and 7.6%, respectively. In the period 2000-2005, 183 fatal accidents were reported, 25% in manufacturing and 20% in construction. The accident-proneness rate decreased from 85 per 1,000 workers in 2000 to 76 in 2005. Case-fatality from work-related accidents has remained at 0.35% during the period. Acute pesticide poisonings are also vastly underreported.

The increase in unhealthy lifestyle behaviors is influencing disease patterns in the population. Accordingly, illness and death due to chronic noncommunicable diseases are on the rise, especially diseases of the circulatory system. In 2003, diabetes prevalence in Managua was 9%. Mortality from diabetes mellitus increased from 8.9 per 100,000 population in 1992 to 18.98 in 2005, and primarily affects the population over age 50. A Managua-based survey of diabetes risk factors revealed a hypertension prevalence rate of 25%. The study found that being overweight was the most frequent risk factor at 65.6%, followed by obesity at 28.3%.

Cervical cancer is the leading cause of tumor-related deaths among women, which together with breast cancer account for 18% of reported cancer deaths. The prevalence of cervical cancer in 2001 was 13.7, and increased to 13.9 per 100,000 population among women over age 15 in 2002.

The growing population of older adults is highly vulnerable. This group has the highest rates of disability and chronic diseases, and 90% has no social security coverage. The country has no programs specifically designed to meet the special health care needs of older adults.

**Table 3. General mortality
Nicaragua: 1995, 2000, 2005**

	General	Maternal deaths	Communicable diseases	TB	AIDS	Malaria	Circulatory system Diseases	Malignant neoplasms
1995								
Total	13,963	121	2,528	231	9	35	3,122	1,238
Men	8,124	-	1,486	146	8	20	1,547	553
Women	5,839	121	1,042	85	1	15	1,575	685
Urban	9,706	-	1,487	142	9	20	2,315	942
Rural	4,257	-	1,041	89	-	15	807	296
2000								
Total	13,610	110	1,395	198	26	11	3,395	1,572
Men	7,838	-	775	124	16	3	1,705	724
Women	5,769	110	620	74	10	8	1,690	848
Urban	8,854	-	758	108	21	1	2,382	1,099
Rural	4,756	-	637	90	5	10	1,013	473
2005								
Total	16,777	105	1,576	194	90	8	4,206	1,983
Men	9,714	-	866	126	65	5	2,137	961
Women	7,060	105	710	68	25	3	2,069	1,022
Urban	10,925	20	901	124	82	1	2,904	1,377
Rural	5,852	85	675	70	8	7	1,302	606

Source: Ministry of Health, Bureau of Statistics.

Notes: Deaths by gender do not include deaths where the sex of the victim was unknown. No data available by ethnic origin.

Maternal Mortality

Each year, some 144⁵ women of childbearing age die of pregnancy related causes; however, underreporting estimated to be as high as 50%. Maternal deaths account for nearly 4% of all deaths. Women ages 20-34 in rural areas with low levels of education and little access to health care are most affected. Maternal mortality data for indigenous women are not available. Maternal mortality has decreased by 46% over the last 15 years, but only by 22% in the last decade. Over 70% of registered maternal deaths are in rural areas and almost half are in women ages 20-34. One out of 3 deaths are adolescents, especially in Jinotega, Chontales, Matagalpa, and RAAN. Teen mothers are an especially high-risk group as their children are at higher risk of low birth weight, have higher infant mortality rates, and are more likely to be weaned at an earlier age.

⁵ UNICEF. (2005). Maternal and Infant Health in Nicaragua (Draft). Managua, Nicaragua.

Infant Mortality

Estimates for the period 1974 to 2001 point to a steady reduction of infant and child mortality, from 100 to 31 per 1,000 live births, and from 137 to 40 per 1,000 live births, respectively.

**Table 4. Neonatal and child mortality
Nicaragua: 1995, 2000, 2005**

Indicator	Neonatal (0 to 27 days)	Post- neonatal (28 days to 11 months)	Child (0 to 11 months)	Post-Child (1 to 4 years)	Total (1-4 years)
1995					
Cause					
Disorders originating in the perinatal period (birth trauma/asphyxiation, and premature birth)	1,182	20	1,202	0	1,202
Infectious intestinal diseases (IIDs)	34	501	535	165	700
Acute respiratory tract infections (ARIs)	0	328	328	152	480
Birth defects	187	76	263	26	289
Nutrition deficiencies	0	48	48	24	72
Other causes	38	254	292	291	583
Total	1,441	1,227	2,668	658	3,326
Geographical area					
Urban	1,005	731	1,736	379	2,115
Rural	436	496	932	279	1,211
2000					
Cause					
Disorders originating in the perinatal period (birth trauma/asphyxiation, and premature birth)	1,110	15	1,125	0	1,125
Infectious intestinal diseases (IIDs)	13	190	203	59	262
Acute respiratory tract infections (ARIs)	4	161	165	70	235
Birth defects	189	108	297	29	326
Nutrition deficiencies	0	58	58	37	95
Other causes	25	196	221	227	448
Total	1,341	728	2,069	422	2,491
Geographical area					
Urban	778	359	1,137	191	1,328
Rural	563	369	932	231	1,163
2005					
Cause					
Disorders originating in the perinatal period (birth trauma/asphyxiation, and premature birth)	1,090	12	1,102	0	1,102
Infectious intestinal diseases (IIDs)	8	121	129	54	183
Acute respiratory tract infections (ARIs)	10	154	164	65	229
Birth defects	231	113	344	32	376
Nutrition deficiencies	2	65	67	27	94
Other causes	24	139	163	191	354
Total	1,365	604	1,969	369	2,338
Geographical area					
Urban	681	253	934	153	1,087
Rural	684	351	1,035	216	1,251

Source: Ministry of Health, Bureau of Statistics. No data available by ethnic groups.

The improvement of these indicators can be attributed to several factors: Expanded Program of Immunization (EPI) coverage of over 80% and the consequent reduction in vaccine-preventable diseases; the promotion of breastfeeding; and control of other infections. This improvement is also the result of increased public investment in basic health services, education, water, and environmental sanitation in rural areas, among others.

Immunization coverage of children under 1 year with the polio and pentavalent vaccines has declined by almost 6% since 2001, whereas BCG vaccination coverage has slipped by 4% (in three of the country's Comprehensive Local Health Systems, SILAIS coverage is greater or equal to national goals).

Inequalities and poverty continue to impact the right to a healthy and long life, especially among children of rural areas and in families living in extreme poverty. The gaps observed in infant mortality rates and among children under age 5 between urban and rural areas are greater than 35%. The increase in neonatal mortality in rural areas during the period 1995-2005 is primarily due to improvements in the capture of mortality data. A similar trend is observed between the segment of the population with greater poverty (50 per 1,000 population), and that of lesser poverty (16 per 1,000 pop.). Between 1998 and 2001, infant mortality declined more among the group in the higher income bracket than that in the lower.

The leading causes of infant mortality continue to be acute diarrheal diseases (ADDs), and acute respiratory infections (ARIs), of which pneumonia is the most common. Other significant causes of infant mortality include premature births, problems associated with low birthweight, asphyxiation, and sepsis. Other leading causes of disease and death among children under age 5 include malnutrition, tuberculosis, intestinal parasitosis, and accidents. These problems are associated with poverty, food insecurity, insufficient coverage and quality of health services, centralized management of the health sector, and limited implementation of policies and programs for the comprehensive health care of childhood.

1.1.3 Millennium Development Goals (MDGs)

As a signatory of both the Universal Declaration of Human Rights (Article 25) and the International Covenant on Economic, Social, and Cultural Rights (Articles 11, 6, and 9), Nicaragua recognizes the right of every person to a decent standard of living for himself and his family, and continuous improvement of living conditions, including food, clothing, housing, work, and social security. Moreover, as a State Party to the Convention on the Rights of the Child, Nicaragua is especially committed to protecting and assisting all children and adolescents to ensure their survival and development. The Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) establishes the obligation of the Nicaraguan State to guarantee equitable development with a view to the full enjoyment of the economic, social, and cultural rights of women.

In 2001, the MDGs were incorporated into the Enhanced Strategy of Economic Growth and Poverty Reduction (ERCERP), and into the National Development Plan (PND) in 2003. That commitment has been evident in efforts of government institutions and the National Board of Socioeconomic Planning (CONPES). CONPES prepared and coordinated the First Global Monitoring Report of the Millennium Summit (December 2003), with support from the agencies of the United Nations system, the Inter-American Development Bank (IDB), and the World Bank (WB)⁶.

The United Nations Development Program (UNDP) is responsible for monitoring the progress made toward achieving the MDGs in Nicaragua. The sources of information for MDG monitoring activities include public sector institutions responsible for implementing government policies, the Technical Secretariat of the Presidency, the National Development Plan, and the Nicaraguan Institute of Information for Development (INIDE)—the official agency in charge of compiling and publishing census and statistical data.

⁶ CONPES is the official coordination agency for government institutions, civil society, and political parties.

There is no specific agency in charge of coordinating plans of the different governmental institutions with respect to the MDGs. Moreover, a number of different organizations came together to organize the Citizen Forum for MDG Monitoring, made up of Nicaraguan-based civil society organizations and NGOs. These organizations work to help implement the MDGs and the Millennium Development Goals Plus (MDGs +) assumed by Nicaragua.

**Table 5. MDG targets/progress, and ERCERP intermediate indicators
Nicaragua: 1993, 2005, 2015**

MDG	Indicator	1993	2005 target	2015 target	Source	Strategic plan
Reduce extreme poverty	% of the total population living in extreme poverty	19.4	16	9.7	LSMS ³ SECEP ⁴	PND, ERCERP, PDHN ⁷
Reduce chronic malnutrition	% of the total population of underweight children under 5	N.D.	17.5	7	LSMS SECEP MINSAs	Strategic Health Plan 2004-2015
Primary education	% of primary school enrollment of official school-age (7-12 years), and the school-age population (7-12 years)	75.6	83.4	90	MECD ⁵ SECEP	Strategic Health Plan 2001-2005 & Education Plan 2008-2010
Reduce maternal mortality	Number of women who die annually of pregnancy, birth, or puerperium related complications (direct & indirect obstetric deaths) per 100,000 registered live births	98	85	43	MINSAs ⁶ SECEP	Strategic Health Plan 2004-2015
Reduce infant mortality	Number of children under age 1 who die annually per 1,000 live births	41 (1995)	31	26	DHS	Strategic Health Plan 2004-2015
Reduce child mortality	Number of children under age 5 who die annually per 1,000 children under 5	53 (1995)	41	32	DHS ⁷	Strategic Health Plan 2004-2015
Increase water service coverage	% of the general population with sustainable access to a source of drinking water	53.6	74.6	89.8	ENACAL ⁸ SECEP	PND, ERCERP, PDHN
Increase safe water coverage in scattered rural settlements	% of the rural population with sustainable access to a source of drinking water	24.5	50.2	73.2	ENACAL SECEP	PND, ERCERP, PDHN
Increase access to basic sanitation services	% of the population with access to basic sanitation services	82.6	85.7	95	SECEP	PND, ERCERP, PDHN
Reduce illiteracy rate	Illiteracy rate (%) among the population age 10 and older	21.5	16	10	LSMS SECEP	Strategic Health Plan 2001-2005 & Education Plan 2008-2010
Increase access to reproductive health services	% of women ages 15-49 with access to reproductive health services	17	20	100	MINSAs SECEP	Strategic Health Plan 2004-2015

⁷ PND: National Development Plan; ERCEPR: Enhanced Strategy of Economic Growth and Poverty Reduction; PNDH: National Plan for Human Development.

MDG	Indicator	1993	2005 target	2015 target	Source	Strategic plan
Increase hospital-attended deliveries	% of total deliveries attended in a clinic or hospital	47.4	55	71	MINSA SECEP	Strategic Health Plan 2004-2015
Prenatal check-up	% of pregnant women with at least one prenatal check-up by qualified health personnel	70.4	86.5	88	MINSA DHS	Strategic Health Plan 2004-2015
Early prenatal check-ups	% of pregnant women served who have a prenatal check-up within the first trimester of pregnancy	32.8	36	46	MINSA DHS	Strategic Health Plan 2004-2015
Coverage: BCG < 1 year; OPV < 1 year; MMR < 1 year	% coverage of BCG/OPV/MMR among children under age 1	93 95.3	95 96.5 93	99 98.5 98.5	MINSA SECEP	Strategic Health Plan 2004-2015
Incidence of ADDs	Per 1,000 population	1.63	16		MINSA	Strategic Health Plan 2004-2015
Incidence ARIs	Per 1,000 population	5.96	20.8		MINSA	Strategic Health Plan 2004-2015

¹ Nicaragua Poverty Update, February 2003

² MINSA maternal mortality data

³ LSMS: Living Standards Measurement Study

⁴ SECEP: Technical Secretariat of the Presidency

⁵ MECD: Ministry of Education, Culture, and Sports

⁶ MINSA: Ministry of Health

⁷ DHS: Demographic and Health Surveys

⁸ ENACAL: Nicaraguan Water and Sewer Authority

Table 6. Funding needed to achieve selected MDGs (US\$ millions)
Nicaragua: 2001, 2005, 2010, 2015

Areas	2001	2005	2010	2015	Average annual growth rate 2001-2015
Total	1.062	1.254	1.456	1.681	3.30%
Basic education	115	123	131	140	1.40%
Maternal and child health	112	159	181	196	4.10%
Water and sanitation	35	56	62	66	4.80%
Other expenditures	800	916	1,082	1,279	3.40%

UNDP. Social investment scenario needed achieve the MDGs and national development goals in Nicaragua, 2000-2015, Managua, 2007.

1.2 Health Determinants

1.2.1 Political Determinants

Nicaragua closed the 20th century playing an important role in the peace process signed by the presidents of Central America in 1987. Armed conflicts, revolutions, and political violence have marked the last 150 years of Central American history. Nevertheless, the country managed to usher out the 20th century with evidence of having overcome the leading causes of its instability: political and military dictatorships; yielding to foreign interests; government overthrows; intolerance of social protest; repression; civil rights restrictions; and lack of a democratic system, thus entering the new millennium with encouraging prospects for political democracy.

Submitting for the first time in its history to an electoral system with internationally acceptable standards, the nation chose its authorities and lawmakers freely and transparently in 1990, 1996, 2001, and 2006. Despite political advances, Nicaraguan democracy is still in its infancy. Consequently, it is subject to conflicts that often threaten its stability. The rule of law and democratic institutionality are parts of the transition to real democracy: they grow, roll back, restart, and move forward at a pace dictated by the political situation. Consequently, the rule of law and democratic institutionality cannot be considered as independent variables from the modernization of the country's political institutions, but instead are parallel and complementary processes.

By developing communication mechanisms —fluid liaisons between the Executive Branch, the National Assembly, the Judiciary, municipal governments, the regional autonomous governments of the Caribbean coast, NGOs, and union organizations— some social and sectoral events as well as labor disputes that adversely impact the population can be avoided, especially those impacting the most disadvantaged segments of society. Examples include the demands of transportation sector workers and educators for better salaries, and the 2006 hospital workers' strike that lasted a full six months. With respect to the latter, the strike's full impact on health indicators is still unknown, but estimates give great cause for concern.

1.2.2 Economic Determinants

Determined to reverse the country's profound macroeconomic imbalances, Nicaragua launched an economic stabilization program in the 1990s. Within the framework of the Poverty Reduction and Growth Facility (PRGF) program, Nicaragua's government has committed to meeting a series of macroeconomic goals and structural reforms. According to the International Monetary Fund's "Article IV" evaluations, Nicaragua has performed admirably in recent years, achieving most of the prescribed structural reforms and quantitative goals, including increasing its international reserves, reducing the fiscal deficit, and controlling inflation, despite the rising cost of oil.

In 2004, the performance of Nicaragua's macroeconomic policy placed the country within striking distance of compliance with the Heavily Indebted Poor Countries (HIPC) initiative and the Multilateral Debt Relief Initiative (MDRI 2006), thus reducing the foreign debt from 155.4% of GDP in 2001 to 108.9% in 2005. The country's efforts to reduce its foreign debt during this period have helped significantly to protect social spending during the period of fiscal adjustment and macroeconomic stabilization under way since 2001.

Nicaragua continues to be the second poorest country of Latin America. According to data of Nicaragua's Central Bank, GDP was US\$4.905 billion in 2005—equivalent to per capita GDP of US\$858.40. Nevertheless, this figure is below the regional average, estimated to be US\$2,732 by the Economic Commission of Latin America and the Caribbean (ECLAC), despite the fact that per capita foreign aid to the country is the highest in the world in terms of its population.

During the period 2000-2005, the average annual growth of GDP has been 3.1%. Growth of per capita GDP has been unstable, reaching an annual average growth of 0.6%. In terms of annual variations, real GDP was 3% in 2001; 0.8% in 2002; 2.3% in 2003; 5.1% in 2004; and 4% in 2005. However, this growth rate will fall short of achieving the goal of a 50% reduction in extreme poverty by 2015. In fact, according to ECLAC estimates, in order to achieve that goal, the Nicaraguan economy would need a sustained annual growth rate of 6% through 2015.

The basic market basket of 53 products amounting to nearly 3,000 Nicaraguan *córdobas* includes many imported products. From January to June 2006, the average minimum wage fluctuated between C\$1005.8 in the agricultural sector to C\$2274.2 in the fishing sector. The minimum wage does not cover the basic market basket for any sector of the economy.

Nicaragua's debt, both foreign and domestic, is rising. As of 31 August 2006, the country's foreign public debt was approximately US\$4.379 billion. Nicaragua's combined domestic (approx. C\$22.660 billion) and foreign (C\$76.876 billion) debt amount to a total accumulated public debt balance of C\$99.536 billion. According to the Nicaraguan Central Bank, as of November 2006 the country's gross international reserves amounted to US\$843.5 million. Inflation increased from 4.8% in 2001 to 9.6% in 2005.

Nicaragua's accession in 2006 to the Central America-Dominican Republic-United States Free Trade Agreement (CAFTA-DR) represents significant opportunities to promote economic growth, exports, and job creation. Nevertheless, the Agreement also poses certain threats, including "free but unfair" competition, cheaper agricultural goods that could put family income at risk, and the high costs of patent-protected drugs. To confront these challenges, the country must undertake internal adjustments to address increasing foreign competition, and redouble its efforts to improve the population's conditions of, and access to education, health, and other basic services if it is to successfully increase capacity, improve infrastructure, and promote increased productivity.

**Table 7. Economic indicators
Nicaragua: 2000-2006**

Economic indicator	2000	2001	2002	2003	2004	2005	2006
Per capita GDP, in constant 1994 US\$	794.1	797.6	812.5	814.7	839.2	858.4	872.4
Economically-active population (thousands)	1,815.0	1,900	1,989.7	1,999.4	2,111.1	2,203.4	2,204.3
Total public spending, as a percentage of GDP	19.8%	20.6%	15.6%	16.6%	18.2%	17.9%	16.7%
Public social spending, as a percentage of GDP	7.6%	7.2%	7.8%	8.7%	8.2%	8.9%	6.5%
Family remittances, as a percentage of GDP	8.1%	8.2%	9.4%	10.7%	11.5%	12.2%	12.4%
Annual inflation rate (%)	9.9%	4.8%	3.9%	6.5%	9.3%	9.58%	9.45%

Source: National Health Accounts - DGPD, MINSA, April 2008.

Employment

An INEC household survey for measuring urban and rural employment (November 2006) revealed that 52.4% of the working-age population is active in the job market, either working or seeking employment (economically-active population – EAP). Employment declined slightly (1.3%), which can be attributed to the impact of programs for eradicating child labor, thus reducing the employment rate among the population age 10-20 years.

Some 47.6% of working-age people are not active in the workforce—people who are not seeking active employment. This group includes housewives, students, pensioners, retirees, people of independent means, and others. Of the total employed population, 31% is underemployed (work less than 40 hours per week or earn less than the minimum wage in their jobs). Furthermore, 63.3% of all workers are engaged in the informal economy. In 2006, women accounted for 37.6% of the total workforce. The open unemployment rate is 6.5%.

**Table 8. Employment rates of the population age 10 and older by level of poverty and sex
Nicaragua: 2005**

Indicator		National	Non-poor	Poor	Extremely poor
Open unemployment rate	Total	4.3	4.9	3.6	3.3
	Male	3.9	4.5	3.3	2.7
	Female	5.1	5.4	4.4	5.5
% employed	Total	95.7	95.1	96.4	96.7
	Male	96.1	95.5	96.7	97.3
	Female	94.9	94.6	95.6	94.5
% employed in the formal economy	Total	33.4	40.2	24.5	21.2
	Male	34.4	43	25.4	22
	Female	31.4	36.2	22	18.3

Source: LSMS 2005.

Poverty

For Nicaragua's population, poverty is the primary determinant of health status. According to the INEC (2004), a national poverty map identified 153 poor municipalities, of which 32 were classified as having extreme levels of poverty and 34 high levels of poverty. The Municipal Human Development Index (MHDI) classifies 30 municipalities as having low and moderate MHDI. Moreover, a food insecurity mapping project identified 37 municipalities with high food vulnerability. Consequently, 1.6 million people are vulnerable according to the poverty map; 2.4 million people according to the MHDI; and 1.6 million people according to the food insecurity map (INEC, 2006).

According to the LSMS 2005 (INIDE), general poverty in Nicaragua was estimated at 48.3% and extreme poverty 17.2%.⁸ Poverty in rural areas continues to be more extensive and far-reaching than in urban areas. These data suggest broad and permanent gaps: while among the urban population extreme poverty is 6.7% and general poverty 30.9%, the corresponding figures for rural areas are 30.5% and 70.3%, respectively.

The two regions with the highest incidence of general poverty in Nicaragua—accounting for three-fourths of the population in that condition—were the rural Central region with 76.8% and the rural Atlantic region with 76.6%. Upon comparing the results of extreme and general poverty over the period 2001-2005, both nationwide and in the urban/rural areas of each of the country's seven regions, *no statistically-significant differences were observed in any case*. In other words, the differences detected between 2001 and 2005 were too small to consider them real. At the national level, the incidence of poverty among women was less than for men, accounting for 52.1% of Nicaragua's non-poor population.

**Table 9. Poverty incidence trends by geographic region and rural/urban areas (%)
Nicaragua, 1993–1998–2001–2005**

Geographic region	General poverty					Extreme poverty				
	1993	1998	2001	2005	Change 2001-05	1993	1998	2001	2005	Change 2001-05
National	50.3	47.8	45.8	48.3	2.5	19.4	17.3	15.1	17.2	2.1
Urban	31.9	30.5	30.1	30.9	0.8	7.3	7.6	6.2	6.7	0.5
Rural	76.1	68.5	67.8	70.3	2.5	36.3	28.9	27.4	30.5	3.1
Managua	29.9	18.5	20.2	21.2	1	5.1	3.1	2.5	3.6	1.1
Urban Pacific	28.1	39.6	37.2	37.7	0.5	6.4	9.8	5.9	6.4	0.5
Rural Pacific	70.7	67.1	56.8	61.5	4.7	31.6	24.1	16.3	20.8	4.5
Urban Central	49.1	39.4	37.6	39.3	1.7	15.3	12.2	11.1	12.8	1.7
Rural Central	84.7	74	75.1	76.8	1.7	47.6	32.7	38.4	37.1	-1.3
Urban Atlantic	35.5	44	43	37.8	-5.2	7.9	17	13.1	9.8	-3.3
Rural Atlantic	83.6	79.3	76.7	76.6	-0.1	30.3	41.4	26.9	34.2	7.3

Sources: LSMS 1998-2005 and World Bank estimates based on the LSMS 1993.

⁸ General poverty includes the population in conditions of extreme poverty as well as the population classified as non-extreme poor (or the poor within the gap).

**Table 10. Distribution of poverty condition by urban/rural area and sex
Nicaragua, 2005**

Poverty level	Nicaragua			Urban			Rural		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total	100	49.1	50.9	55.8	26.4	29.5	44.2	22.7	21.5
Non-poor	100	47.9	52.1	74.6	34.6	40	25.4	13.2	12.2
General poor	100	50.4	49.6	35.7	17.5	18.2	64.3	32.8	31.4
Non-extreme poor	100	50.2	49.8	43.5	21.2	22.3	56.5	29	27.5
Extreme poor	100	50.6	49.4	21.7	10.8	10.9	78.3	39.8	38.5

Sources: LSMS 1998-2005 and World Bank estimates based on the LSMS 1993.

1.2.3 Social Determinants

The country has made significant advances in policy-making and strategies in the area of food and nutritional security within the National Development Plan (PND) and National Health Plan (PNS). While these plans include specific lines of action, their implementation has been uneven and resulted in a duplication of efforts. At the household level, food insecurity is associated with unemployment, underemployment, and low levels of income, resulting in insufficient financial resources to cover the basic market basket.

The primary social disparities in Nicaragua are in the areas of gender (unemployment rate is twice as high among females; they comprise 80% of the informal economy and earn 20% less than men), child labor, problems of access to services among indigenous groups and people of African descent (more than 75% without access), and the widening gap between the population in the higher and lower income quintiles (wealthiest 20% of population own 49% of the country's income).

Differences by geographic region are marked: the Caribbean regions have the worst quality-of-life indicators, including scant access to health services. They have a highly disperse, low density population: 97.5% of human settlements there have less than 2,500 inhabitants, in addition to insufficient road infrastructure, which impact access to services.

Family violence is a problem that primarily affects women and children. Nicaraguan youth face the growing problems of violence, injuries, substance abuse (tobacco, drugs and alcohol), lack of opportunities, and unemployment. Sexual abuse, sex crimes, and the sex trade are increasing. The child labor market in Nicaragua includes some 240,000 children and adolescents aged 5-17 years work, of which 61.4% receives no economic remuneration for their work.

Education

Despite the existence of education policies and sectoral plans, it is estimated that 35% of children and adolescents in the 3-18 years age group is excluded from the education system as a result of scant geographical and economic access to schools. The average education level of the population over age 10 is 5.2 years of schooling. The corresponding figure for the population living in extreme poverty is 2.2 years. On average, the non-poor population receives 6.6 years of schooling, while rural dwellers barely receive 3.3 years.

The illiteracy rate decreased from 50.35% in 1980 to 12.96% in 2005, but is as high as 20% in some areas of the country. In 2005, preschool coverage of children was below 30.7%. According to the Ministry of Education, Culture and Sports (MECD), the net rate of primary school enrollment has not experienced constant growth, with 85.47% for 2002 and 82.58% in 2004, meaning that between 800,000 and 1 million children and young people do not attend school.

In 2005, there were 417,248 students enrolled in secondary education, and only 39% of young people of secondary school age attended school. According to estimates for 2003, the secondary school completion rate was 45.24%. DHS 2001 survey data indicate that only 19.9% of men and 36.1% of women have completed secondary education. These data also show that 25.9% of the Nicaraguan population is unable to read or write.

Enrollment in adult education was 187,858 students in 1983; 86,100 in 2000; 77,019 in 2004; and 100,000 in 2005. Although an increase was observed in adult education enrollment in 2000, it is far less than the increase observed in 1983. According to estimates, slightly more than 100,000 students enroll in university each year; however, the gross coverage rate is 22.4%, while net coverage ranges between 12% and 16%.

Nicaragua's greatest relative weakness is its expenditure per secondary student. This spending amounted to 5.2% of per capita GDP, while the corresponding average for Latin America was 18%. In 2005, the shortfalls in funding the MECD and MINSa would need to make up in order to achieve the pertinent MDGs were approximately US\$75.6 million and US\$50 million, respectively.

1.2.4 Environmental Determinants

In Nicaragua, the institutions responsible for environmental issues are: Ministry of the Environment and Natural Resources (MARENA); Office of the Attorney General of the Republic, through the Office of the Special Prosecutor for Environmental Issues; Office of the Public Prosecutor; Ministry of Health; ENACAL; INAA; INETER; FISE; other government institutions, in accordance with their specific areas of competence and legal mandates; and the National Water Commission (ANA), pursuant to the National Water General Law and its Regulations. Other actors involved include municipalities and their municipal councils; the regional governments of the RAAS and RAAN; the National Assembly, through the Commission on the Environment and Natural Resources, in conjunction with the Commission on Health and Social Well-being due to the intrinsic linkages of the determinants impacting the health of the population.

Annual health data are published on the Institutional Bulletin of Basic Health Indicators. Environmental indicators are prepared in coordination with technical personnel of the pertinent institutions, which MARENA compiles and provides through the National Environmental Information System (SINIA). SINIA monitors indicators for water quality, service coverage, water pollution, and tourism.

Operational research is carried out on topics that include the arsenic content of water, pesticides, the effects of agrochemicals on tobacco plantation workers, lead exposure among adults and children, and skin cancer. These data are captured from morbidity and health care statistics. However, no research has been carried out with the necessary scientific rigor to assist in the search for preventive responses and socio-environmental care. This is a topic of interest to public health and should be taken up by MINSa's Research Committee. Moreover, efforts are needed at MINSa to promote research development and a culture of health from within the organization.

With regard to the environment, the legal mechanisms are established through existing legislation and pertinent regulations; owners of businesses that generate environmental pollutants are required to comply with these.

According to DHS data, only 31.1% of Nicaraguan households have household water connections to potable water systems.

2 Functions of the Health System

2.1 Steering Role

Article 4, Title I of the General Health Law establishes that responsibility for the steering role in health is incumbent on the Ministry of Health (MINSa), which is in charge of coordinating, organizing, supervising, inspecting, controlling, regulating, ordering, and monitoring health actions, without prejudice to its functions as the lead agency of the institutions that make up the health sector, in accordance with special legal provisions.

2.1.1 Mapping of the Health Authority

The right to health is guaranteed in Article 59 of the Nicaraguan Constitution: “Nicaraguans have the right, equally, to health. The State shall establish the basic conditions for the promotion, protection, recuperation, and rehabilitation of health. The State shall be responsible for directing and organizing health programs, services and actions, and shall promote citizen participation in their defense. Citizens have the obligation to respect such sanitary measures as are determined.”

This right is safeguarded in the General Health Law, which establishes MINSa as the authority responsible for enforcing, supervising, controlling, and evaluating compliance with this Law and its Regulations; in addition to developing, approving, implementing, supervising, and evaluating technical standards, and formulating the requisite policies, plans, programs, projects, manuals, and instructions for their implementation.

In carrying out its activities, MINSa is required to coordinate with other regulatory agencies, such as the Ministry of Agriculture and Forestry (MAGFOR) on plant and animal health and food security; the Ministry of Education (MINED) on health education; the Ministry of the Environment and the Natural Resources (MARENA) and the Nicaraguan Water and Sewer Institute on water control, quality, and wastewater disposal; and with the municipal councils on solid waste management.

2.1.2 Implementation of General Health Policy

The National Health Policy is the set of guidelines or directives prepared in response to the demands of the Nicaraguan population in terms of health status and the challenges of the health sector.

MINSa prepared the National Health Policy 2004–2015 in accordance with the National Development Plan and MDGs. The National Health Plan 2004-2015 establishes the scope of the National Health Policy with greater precision (e.g., objectives, goals, and strategic interventions). The Plan’s design incorporates indicators and systematic monitoring mechanisms, the latter of which are to be used for the pertinent monitoring and evaluations.

Monitoring of the National Health Plan’s implementation, as established in the General Health Law, is the responsibility of MINSa, through the General Bureau of Planning and Development, which, from the operational standpoint, establishes the necessary links between the institutions and organizations of the health sector with a view to collecting, processing, and analyzing the necessary data, and making it available to the agencies responsible for health-sector management.

Sector-wide Approach in Health

The Ministry of Health, within the context of strengthening its health leadership role, is developing a “Sector-wide approach for Health” (SWAP). Accordingly, it calls on its development partners, and government institutions and agencies that have a direct role in health-sector development to actively participate in the sector’s development.

Development of the SWAP includes the strengthening of appropriation and leadership processes to ensure the effective management of the sector on health policies and strategies, and to efficiently coordinate national development in health. Appropriation and leadership have focused on the

incorporation of the sector's development objectives into policy-making at the national, sectoral, and regional levels.

Moreover, all stakeholders involved in sectoral development—development partners, government institutions and agencies—are being encouraged to join forces to step up joint efforts to address national priorities, objectives, and policies; thereby creating a catalyst for action based on the priority needs of the population.

Finally, SWAP aims to harmonize administrative processes to improve the efficiency and use of resources. This should significantly reduce the transaction costs of cooperation by employing accountability, procurement, and internal auditing processes, based on those established by the country in a transparent manner through its legislation. Moreover, this approach should also reduce the time necessary to prepare reports and organize missions to supervise, review, and evaluate projects.

In 2005, Law No. 550 on budgetary management was enacted, establishing the use of medium-term (3-year) budgetary frameworks. The frameworks are updated in detail annually, and establish ceilings for the budget period. This change should prompt a rethinking of the 5-year programming approach and adjust it to the medium-term model used by the government.

The 5-year Health Plan 2005-2009 has been an essential catalyst for facilitating the alignment of cooperation. Moreover, a Common Fund (*Fondo Común*) has also been established to support the budget, and help strengthen activities in the 5-year Plan.

2.1.3 Sectoral Regulation

MINSa exercises its regulatory function through the licensing and accreditation of health facilities; the registry of health professionals; application of the Law on Drugs and Pharmacy Establishments; the registry of cosmetic products; the food and beverage registry; surveillance of food fortification programs, including salt, sugar, and flour; analysis of prepared foods samples (dairy products, water, sauces, and others); the registry and supervision of food establishments; and the registry of international organizations that carry out activities in the health field.

MINSa also regulates the entry of donated medical supplies (freight or baggage), as well as international delegations and medical brigades from foreign governmental agencies or NGOs to provide humanitarian medical assistance to the population with limited resources.

MINSa also coordinates with universities and the National Board of Universities (CNU). The CNU is responsible for authorizing the establishment of universities and issues opinions—positive or negative—on the introduction of university curricula. For this reason, MINSa operates a registry of university degrees conferred by human resources training institutions that are accredited by the CNU.

The following legislation provide the legal framework for MINSa's sectoral regulation: the General Health Law and its Regulations; Law No. 290 (Law on the Executive Branch); the Basic Sanitary Provisions; Decree Nos. 394 and 432; Law No. 182 (Consumer Protection Act); Law No. 219 (Law on Technical Standards and International Standards of the *Codex Alimentarius*); and Law No. 292 (Law on Drugs and Pharmacy Establishment and its Regulations).

According to the results of the 2001 Measurement of Essential Public Health Function No. 6, "Strengthening of institutional capacity for regulation and control in public health," there has been a high degree of compliance in the enactment of laws and regulatory framework in health. However, this has not been the case with efforts to enforce standards, develop institutional monitoring capacity, or correct the absence of incentives for the inspection role and lack of supervision of control processes.

Environment

Nicaragua has a vehicle emissions control law; the Ministry of Environment and Natural Resources (MARENA) is responsible for this legislation and established its mechanisms. Working through the Inter-Agency Commission, MINSa coordinates with the Ministry of Transportation and Infrastructure

(MTI), and with the National Police through the National Transit Bureau. The country has equipment to measure environmental contaminants released in the process of combustion. The country also has a set of vehicle emission standards; vehicles must pass inspection at the country's network of accredited vehicle emissions control service stations. Imported used vehicles must comply with the Customs Authority's environmental regulations.

The legal provisions regarding air pollution are found in Chapter II, Article 8 of Law No. 559, the Special Law on Crimes against the Environment and Natural Resources. Title IV (Health and the Environment), Chapter I (Environmental Sanitation) of the General Health Law, Law No. 423, establishes the maximum permissible ranges of environmental contaminants as well as the technical standards applicable to individuals and legal entities on environmental matters. MINSa, municipal and regional governments, ENACAL, FISE, and INAA have legal control mechanisms in place for excreta and waste disposal.

The National Atomic Energy Commission, an agency under MINSa, is responsible for regulating toxic and radioactive products. Its legal bases include provisions, standards, and recommendations in this area, and health legislation. The Commission includes a member of the National Autonomous University of Nicaragua (UNITE). Toxic substances are regulated by legislation in this area through institutions of MAGFOR, MARENA, MINSa, MTI, ENAP, and DGA (Customs Authority), and coordinated through workplace institutions, MITRAB, trade associations, and unions.

With respect to water pollution control, MARENA, ENACAL, and INAA perform health inspections and water sampling. These institutions perform tests on pollution burdens, carry out environmental assessments, monitor water quality, and inventory problems in the nation's water courses. Through the General Law on National Water Resources and its Regulations, the National Water Authority (ANA) is responsible for developing binding regulations and establishing new mechanisms in accordance with the law.

The legal bases that guarantee the population's access to drinking water are: public investment program; investments on subsidies for water rates; protection and priority of water for human consumption accorded by the General Law of National Water Resources and its Regulations; and priority for rural and peri-urban development for families and marginalized communities without access to drinking water. Water quality monitoring actions include health promotion campaigns, chlorine distribution programs, and drinking water sampling and analysis. Health status and morbidity/mortality indicators are used in assessing priorities for drinking water and sanitation projects at the community level, in accordance with the principles enshrined in the Nicaraguan Constitution and human rights.

Included among MINSa's areas of competence are its responsibilities for carrying out sanitary inspections; monitoring water quality; preparing public service information and educational messages for use in promoting all water and sanitation projects that benefit the population; and disseminating health messages in rural areas via local media throughout the national territory.

2.2 Financing and Assurance

2.2.1 Financing and Expenditure

Generally, health sector financing originates from three sources:

(a) **Private sources.** Most resources that finance health sector spending come from the private sector, especially households. Household out-of-pocket expenditures account for approximately 50% of all resources that finance health sector spending. These resources are used to pay for health insurance, medical consultations, drugs, and treatment in public and private health establishments. This high degree of financing from private sources to fund health sector spending is consistent with the patterns observed in other countries with limited development, or where the State has marginal involvement in the protection of its population.

(b) **Public sources.** Public sources of financing include taxes and so-called "interim relief funding," or resources of the national budget that were originally intended to pay down the country's foreign

debt, but “forgiven” by creditors on the condition that they be used for specific purposes, such as health. Resources obtained from these two sources are transferred by government budgetary allocations to the Ministries of Health, Government, Defense, and to other public institutions, through the Ministry of Finance. Public sources of financing constitute the second most important source of all financing for the health sector. In 2003, public sources accounted for 32.6% of total contributions to the health sector.

(c) **International cooperation.** Finally, international cooperation consists of loans and donations from the international organizations. In 2003, international cooperation resources accounted for 10% of health sector financing.

During the period 2000-2004, health sector financing increased considerably, from US\$275.4 million in 2000 to US\$354.9 million in 2004. In terms of percentages, financing for the sector increased by 1.7% between 2000 and 2001, and by 9.0% between 2003 and 2004, which includes all sources of financing (tax revenues, public funding, international cooperation, and private funding). Noteworthy in this regard has been the contribution of the public subsector’s “interim relief funding” over the last three years, amounting to 0.2%, 0.5%, and 0.6% of GDP, respectively. Moreover, this source of financing accounted for 7.9% of total health sector financing in 2004.

According to 2003 data of the National Health Accounts, national spending on health accounted for 7.8% of GDP, with public spending accounting for 3.7% of GDP that same year.

**Table 11. Health sector financing
(in 1994 US\$ millions and as a percentage of GDP)
Nicaragua: 2000-2004**

HEALTH SECTOR	2000	2001	2002	2003	2004
1. Public subsector	147.2	150.9	156.5	184.2	196.4
(as a percentage of GDP)	3.7%	3.8%	3.7%	3.9%	3.7%
1.1 Ministry of Health, decentralized agencies, and other public institutions ¹	107.5	103.6	112.5	135.1	137.7
(as a percentage of GDP)	2.7%	2.6%	2.8%	3.3%	3.0%
1.1.1. Domestic financing	91.5	83.7	83.5	83.9	72.1
(as a % of GDP)	2.3%	2.1%	2.1%	2.0%	1.6%
1.1.2. External financing	16.0	19.9	29.0	51.1	65.6
(as a percentage of GDP)	0.4%	0.5%	0.7%	1.2%	1.4%
1.2. Nicaraguan Social Security institute (INSS)	39.7	47.3	43.9	49.2	58.7
(as a percentage of GDP)	1.0%	1.2%	1.1%	1.2%	1.3%
2. Private subsector	128.2	129.0	142.1	141.2	158.5
(as a percentage of GDP)	3.2%	3.2%	3.5%	3.4%	3.5%
TOTAL HEALTH SECTOR FINANCING	275.4	279.9	298.5	325.5	354.9
TOTAL FINANCING/GDP (%)	7.0%	7.0%	7.4%	7.8%	7.8%

¹ Decentralized agencies (Central Bank of Nicaragua, City Hall of Managua, Universities); other public institutions (Ministry of Government, Ministry of Defense, and others).

Source: DGPA/MINSA, National Health Accounts, September 2007.

Over the period analyzed, total household expenditures in health has averaged 50.2% of total health sector expenditures. The percentage of household expenditures in health has been declining slowly, from 51.1% in 2000 to 49.4% in 2004, representing on average 3.6% of GDP for the period. Of the total household expenditures on health during the period, an average of 71.8% of that amount was spent on medications, which suggests that most of the population is self-medicating.

Low-income household spending on medication represents 30.1% of total health sector expenditures, averaging 2.2% of GDP. This is stretching poor families' scarce resources, making it all the more difficult for them to improve living conditions in terms of housing, education, and recreation, not to mention meeting basic needs for a decent and healthy life. Moreover, it is estimated that a high percentage of this spending is financed with family remittances, defined as money transfers from family members living abroad. According to data of Nicaragua's Central Bank, family remittances averaged 9.6% of GDP during the period 2000-2004.

**Table 12. Health sector expenditure (in 1994 US\$ millions and percentage)
Nicaragua: 2000-2004**

Indicator	2000	2001	2002	2003	2004
Health sector expenditure as a percentage of GDP	7.0%	7.0%	7.4%	7.8%	7.8%
Per capita health sector expenditure (US\$/inhabitant)	54	54	58	62	66
Public expenditure in health/total public expenditures (%)	18.8%	18.3%	24.8%	26.7%	23.7%
Per capita public expenditure in health (US\$/inhabitant)	29	29	30	35	37
Household expenditure in health as a percentage of GDP	3.0%	2.9%	3.4%	3.0%	3.2%

Source: DGPA/MINSA, National Health Accounts, September 2007.

The public subsector accounts for 54.3% of health sector expenditure, followed by the private subsector at 45.7%. As a percentage of GDP, the corresponding average figures are 4.0% and 3.4%, respectively. In both subsectors, most resources are spent on curative services, averaging 19.5% in the private and 9.7% in the public sector. With regard to total expenditure, in the public subsector the health promotion and preventive care function averaged 6.7% of the total health sector expenditure. In contrast, in the private subsector this function averaged 0.8% of total health sector expenditure by function over the period. This shows that preventive care is lacking in the public subsector and minimal in the private subsector. Thus a better approach to health promotion and prevention is needed.

**Table 13. Health sector expenditure by function (in US\$ millions and as a percentage of GDP)
Nicaragua: 2000-2004**

	2000		2001		2002		2003		2004	
1. PUBLIC SUBSECTOR	147.2	3.7%	150.9	3.8%	156.5	3.9%	184.2	4.4%	196.4	4.3%
Curative services	49.8	1.3%	49.8	1.2%	58.8	1.5%	68.8	1.7%	74.3	1.6%
Health promotion and preventive care	18.9	0.5%	22.7	0.6%	23.1	0.6%	22.9	0.6%	13.6	0.3%
Rehabilitation services	0.6	0.01%	0.6	0.01%	0.5	0.01%	0.7	0.02%	0.6	0.01%
Long-term care services	1.4	0.04%	1.8	0.04%	1.6	0.04%	1.8	0.04%	1.6	0.04%
Auxiliary services (laboratories)	2.6	0.06%	2.7	0.07%	4.4	0.1%	5.1	0.1%	6.0	0.1%
Medical inputs	37.3	0.9%	40.2	1.0%	35.8	0.9%	44.8	1.1%	49.6	1.1%
Administration	11.4	0.3%	12.0	0.3%	12.5	0.3%	14.5	0.4%	18.5	0.4%
Human resources education & research	8.2	0.2%	1.2	0.03%	4.3	0.1%	6.7	0.2%	8.6	0.2%
Capital spending on infrastructure and equipment	16.1	0.4%	18.2	0.5%	13.0	0.3%	16.4	0.4%	22.0	0.5%
Other expenditures not classified by function	0.9	0.02%	1.7	0.04%	2.6	0.06%	2.5	0.06%	1.4	0.03%

	2000		2001		2002		2003		2004	
2. PRIVATE SUBSECTOR	128.2	3.2%	129.0	3.2%	142.0	3.5%	141.2	3.4%	158.5	3.5%
Curative services	27.8	0.7%	33.1	0.8%	34.6	0.9%	23.9	0.6%	26.7	0.6%
Health promotion and preventive care	2.8	0.07%	3.3	0.08%	1.5	0.04%	0.9	0.02%	4.2	0.1%
Rehabilitation services	-	-	-	-	-	-	-	-	-	-
Long-term care services	-	-	-	-	-	-	-	-	-	-
Auxiliary services (laboratories)	8.5	0.2%	10.4	0.3%	11.1	0.3%	7.0	0.2%	7.7	0.2%
Medical inputs	85.1	2.2%	78.3	1.9%	91.7	2.3%	97.8	2.4%	115.2	2.5%
Administration	2.0	0.05%	1.9	0.05%	0.6	0.01%	3.9	0.09%	1.5	0.03%
Human resources education and research	-	-	-	-	0.6	0.02%	0.1	0.004%	1.7	0.04%
Capital spending on infrastructure and equipment	0.2	0.01%	0.4	0.01%	0.2	0.004%	0.7	0.02%	0.7	0.01%
Other expenditures not classified by function	1.7	0.04%	1.6	0.04%	1.7	0.04%	6.9	0.2%	0.8	0.02%
TOTAL HEALTH SECTOR	275.4	7.0%	279.9	7.0%	298.5	7.4%	325.5	7.8%	354.9	7.8%

Source: MINSA, National Health Accounts.

2.2.2 Assurance

Nicaragua's Constitution recognizes the population's right to health. Moreover, Article 1 of the General Health Law states that the Law's purpose is to safeguard the right of everyone to enjoy, preserve, and recover his/her health, in accordance with legal provisions and special standards.

The General Health Law and its Regulations establish the various systems and plans that guarantee coverage and access to health services. According to law, the health sector is comprised of three systems or benefits packages designed to implement the principle of universality. These are: the contributory, noncontributory, and voluntary systems. These systems finance the benefits packages available to the insured, provided the conditions established in the General Health Law and its Regulations for each program are met. The country's health authorities are responsible for guaranteeing, monitoring, and modulating the complementarity of resources from the various sources to ensure the population has equitable access to health services.

The contributory system has mandatory insurance program for general workers (INSS), members of the military, and police. The INSS provides benefits through the Medical Service Provider Corporations (EMPs), as well as public and private health care providers. The country's military and police have their own health service providers.

No private insurance system with expanded coverage has been developed. However, there are insurance policies offering disease and accident coverage that reimburse beneficiaries for their expenses.

MINSA is the agency responsible for guaranteeing the population's access to the different insurance systems and for protecting the right of users to be informed and receive quality care. To this end, Nicaraguan legislation has mandated the implementation of a quality assurance system, which includes standards and actions aimed at promoting and guaranteeing quality conditions in the management and delivery of health services, so as to ensure users receive maximum benefits and satisfaction, as well as lower costs and risks. It consists of: licensing and accreditation of health

establishments; health care quality audits, the regulation of health care professionals, and bioethical tribunals.

Both MINSA and the MIFIC's Office of Consumer Protection receive and resolve user complaints regarding health care providers. Moreover, MINSA carries out periodic surveys on user satisfaction with a view to improving the delivery of health services.

➤ **Legal framework**

There is body of legislation that defines the beneficiaries of the health services, the most significant of which are the General Health Law and its Regulations, and the Social Security Act.

➤ **Benefits**

Legislation, health plans and programs establish the benefits packages to which the insured are entitled under the welfare, contributory, and noncontributory systems administered by MINSA. Supplemental services are not included in the private sector.

➤ **Structure and management**

In theory, the INSS is in charge of regulating the insurance systems. However, military insurance systems are governed by the regulations of the Office of the Comptroller of the Republic. Private insurance is governed by regulations of the Office of the Bank Examiner and other financial entities.

➤ **Population coverage**

Estimated coverage rates by the institutions of the health sector are as follows: MINSA 60%; INSS 7.7% (members and their families); the Ministry of Government and the military system 8%; and private institutions 4%. Most of the population supplements MINSA health care with services from the private and NGO sectors. The lack of compliance with current social security legislation, which requires INSS health care coverage of all workers within 72 hours of employment, constitutes a serious obstacle to health services coverage. On the one hand, this lack of compliance violates the right to insurance coverage of nearly 40% of workers employed in the formal economy, including some public sector employees. On the other, this uninsured group is absorbing MINSA health resources that would otherwise be used to care for the uninsured population.

As of December 2006, the INSS covered a total of 439,002 members, of which 216,598 were men (51%) and 222,404 (49%) women. Some 74% of the insured population is concentrated in the departments of Managua, Chinandega, León, and Matagalpa. The remaining 26% of the insured population resides in the departments of Masaya, Grenada, Carazo, Rivas, Boaco, Matagalpa, Jinotega, Estelí, Madriz, Neuva Segovia, RAAN, RAAS, and Río San Juan.

Some 18% of the economically-active population (EAP) is currently enrolled in the INSS, which, together with its beneficiaries, account for approximately 7.7% of the total Nicaraguan population with INSS coverage. However, not all INSS beneficiaries are covered under the comprehensive system that includes disease and maternity benefits. In 2006, approximately 12.6% of INSS beneficiaries are only covered under the system of "disability, old age, and death."

In recent years, EMPs have increasingly assumed responsibility for the coverage of beneficiaries under the comprehensive system. Currently, EMPs cover 92.6% of beneficiaries under the comprehensive system (77.4% of the insured population; however, this does not include benefits coverage for approximately 100,000 INSS beneficiaries). Moreover, given the wide geographical distribution of INSS beneficiaries and the fact that most EMPs are located in the country's Pacific region, a significant portion of these beneficiaries do not have access to the EMPs. Consequently, beneficiaries without access to EMPs are forced to resort to MINSA for health services.

A number of factors impact access of the uninsured population to MINSA health services. Due to the unequal distribution in the supply of MINSA health services, geographic access of the population is adversely affected, especially among the poorer sectors, which cannot afford the

transportation and lodging costs involved in accessing services available at the departmental capitals.

This situation can be observed in the use of MINSA health services, which is closely related to the degrees of the population's well-being identified by the DHS 2006-2007. Accordingly, 77.1% of children have completed their vaccination series by age, representing a slight increase over the corresponding figure for 2001 (73.5%). By region, the highest rate of complete childhood vaccination coverage is observed in the Central region (88.8%), whereas the Atlantic region has the lowest coverage (65.7%). Noteworthy is that, on average, urban and rural areas have similar rates of coverage, with 78.2% and 75.7%, respectively. Moreover, the limited operational and resolution capacity of health establishments at the first level of care has decreased basic services coverage by as much as 65% among the most vulnerable segments of the population, especially in rural areas. The decline in the operational capacity of service providers may be partly explained by existing competition from the Comprehensive Local Health Systems (SILAIS), which make decisions and have access to funding from the health centers/posts of the municipal health services.

➤ **Payment mechanism for service providers**

Currently, MINSA does not pay external health care service providers. The INSS pays a flat US\$14.40 (2005) monthly fee to cover each active beneficiary with a predefined package of services. However, this coverage is not universal with respect to benefits, dependents, or age.

The INSS does not consider EMP size or structure by age and sex, household composition by number of dependents, or the consumption of health services per household member. All of these variables have a significant impact on the operational costs of each clinic.

2.3 Delivery of Health Services

The delivery of health services is currently done through different health subsystems: the **public subsystem**, comprising the network of civilian and military health posts, health centers, and hospitals, and the **private subsystem**, made up of individual physician's offices, hospitals, clinics, and EMPs. The private subsystem also includes natural and alternative medicine centers and physician's offices.

In addition, there are a number of private clinical laboratories, diagnostic imaging services, optical centers, and pharmacies. A community subsystem is also in place, made up of networks of medical brigades, midwives, and voluntary collaborators who work to improve the health of their communities. The basic unit of this subsystem are maternity facilities and homes that provide housing to pregnant women and care during the peripartum for women in remote communities where access to care is not readily available.

MINSA is the country's main health care provider. MINSA operates offices in each of the country's 15 departments and two autonomous regions. These offices are in charge of the technical and administrative aspects of the corresponding departmental/regional services network. These offices, known as "Comprehensive Local Health Care Systems" (SILAIS), have been increasingly assuming responsibility as the decentralization of services moves forward. Some public hospitals of the MINSA network, as well as those of the military and the Ministry of Government, have created the EMPs, which are in charge of selling services to the social security system and the general public. A full 20% of the country's existing EMPs belong to the Ministry of Health.

The Ministry of Government has a services network through which it provides curative care primarily to its employees and their family members; it also sells services through an EMP to the INSS and the general public who can pay for them. In addition, the Ministry of Defense provides health care for its employees and their family members.

The INSS is the social security authority. In Nicaragua, salaried workers are required to enroll in the insurance system for disability, old age, and death, as well as occupational hazard insurance; enrollment in health insurance is compulsory only for salaried workers who live in areas where the

INSS offers health services. The INSS does not have its own medical infrastructure network, but instead contracts with EMPs of both the public and private sectors for health care services. INSS contracts with EMPs provide per capita payments and payment per health event. Payments to each EMP depend on the number of enrolled beneficiaries. The INSS provides for a package of basic services covering direct beneficiaries, their dependant children under age 12 years, pregnancy and delivery services for their spouses, and cervical and breast cancer coverage.

NGOs provide primary care services to supplement public health care; these plans are based on a mix of public-private provision and financing.

2.3.1 Supply and Demand for Health Services

MINSA, through its primary and secondary services network, is the country's main supplier of health services. MINSA's first level of care consists of health centers and health posts. MINSA operates health centers with different types of response capacity in each municipality: some have beds while others are exclusively outpatient. In the departmental capitals, MINSA may operate more than one health center. MINSA operates 11 health centers in Managua. These centers offer practically all types of health promotion and disease and risk prevention services, as well as general curative care, preventive and restorative dentistry, and some medical specialties, primarily for women and children in areas where there are sufficient resources to do so. Health posts have less response capacity than health centers; many health posts are staffed exclusively with nurses, although some may include a physician.

Clinics and hospitals make up the second level of care and these facilities also provide primary care services. These facilities provide general and specialized care, outpatient services, and hospitalization. The second level of care also includes national radiation therapy, ophthalmology, cardiology, dermatology, and psychiatric centers, as well as the National Public Health Center of Diagnosis and Reference.

The Ministry of Government operates a significant services network nationwide. Its primary care network includes 20 health posts that provide services to its employees who reside near Ministry workplaces. Its specialized care network included 17 health units located in the departmental capitals. These health units offer general medical consultations, dentistry services, prenatal care, and routine health examinations. The Ministry also operates three hospitals that perform testing, surgeries, and rehabilitation services.

The Ministry of Defense operates 9 medical units and 11 health posts located in each regional command center, as well as a hospital that has its own EMP.

**Table 14. Health services use (overall use rate)
Nicaragua: 2007**

		Outpatient care (1st level of care)	Medical consultations (2nd level of care)
Gender	Male	3,304,274	747,564
	Female	7,447,631	1,203,897
Ethnic Group	Mestizo	10,212,952	ND
	African descent	50,670	ND
	Indigenous	487,664	ND
	Others	619	ND
Age Group	< of 5 years	2,987,135	299,170
	5—14 years	1,434,913	251,409
	15-49 years	5,044,891	1,400,882*
	50-64 years	827,057	ND
	65 and older	457,909	ND

Sources: Information Systems Division, Bureau of Statistics.

*15 years and older (no further breakdown by age available).

2.3.2 Human Resources Development

➤ Human Resources Training and Management

Human resources education for the health sector is carried out by training institutions. Generally, these institutions are managed by public and private universities. Each year, between 250 and 300 physicians graduate from these universities, and a much smaller number of nurses. The Ministry of Health has called on the country's National University to evaluate general medicine program, with a view to updating physician training to the needs of the first and second levels of care.

In accordance with the government's health policies, university enrollment has experienced increases in areas of specialized medicine and in the training of auxiliaries, technical personnel, and non-physician professionals in other areas of public health. Currently, efforts to enhance health worker certification are under way.

With regard to nurse training, the general nursing program has been implemented. The program emphasizes public health and the enhancement of nursing personnel capacity at the first level of care, with a view to strengthening capacity at the municipal level. With regard to medical specialties, programs have been developed and implemented to increase medical care problem-solving capacity at the first level of care, based on priority health problems in the areas of epidemiology, maternal and child health, and toxicology. Master's and diploma degrees have also been implemented to strengthen managerial capacity, with emphasis on management teams at the municipal and national levels.

Health research at the institutional level is still in its infancy, although in health units and especially hospitals, efforts in this regard are being made. However, MINSA has not developed a national health research plan or coordination mechanisms between the Ministry, universities and research centers. Evaluations of the essential public health functions identified health research as the health system's weakest function.

**Table 15. Human resources of public sector institutions
Nicaragua: 2000-2007**

YEAR	PHYSICIANS		NURSES		NURSING AUXILIARIES	
	SEX		SEX		SEX	
	M	F	M	F	M	F
2000	1034	985	78	1422	534	3962
2001	ND	ND	ND	ND	ND	ND
2002	1097	969	97	1453	538	3848
2003	1100	1002	360	1286	620	3802
2004	1090	1027	138	1616	616	3694
2005	1106	1046	128	1653	601	3635
2006	1207	1156	136	1977	521	3366
2007	1376	1231	172	2265	530	3287

Source: Bureau of Human Resources, MINSA.

**Table 16. Human resources of the health sector
Nicaragua: 2000-2007**

Human Resources/Academic Year	2000	2001	2002	2003	2004	2005	2006	2007
Physicians per 10,000 population	3.98	ND	3.87	3.83	3.76	3.92	4.22	4.65
Professional Nurses per 10,000 pop.	2.96	ND	2.90	3.00	3.12	3.25	3.78	4.35
Number of students who complete the coursework of graduate-level degrees in public health	36	41	63	103	36	112	24	55
Number of students who graduate with graduate-level degrees in public health	25	32	52	56	29	84	4	9

Sources: Lists compiled for December 2000-2007, MINSAs.
INEC, estimates, Office of Social and Population Statistics, May 2004.
INEC-CELADE review based on population censuses 1971-1995, and 2005.
Source: UNAN-León and CIES post-graduate schools.

➤ Health Sector Governance and Conflict

The Ministry of Health has signed the Collective Bargaining and Salary Agreement with health worker unions. The Agreement establishes the duties and rights of both employers and employees, guaranteeing the participation of workers through their union representatives in all processes of budget formulation, execution, monitoring, and control. Noteworthy in this regard are the Labor Code (Law No. 185) and the Civil Service and Administrative Career Act and its Regulations (Law No. 476).

Negotiation of the Collective Bargaining and Salary Agreement represents an opportunity for consensus-building. It establishes agreements between the authorities of the Ministry and its workers. Another form of consensus-building has been the establishment of labor commissions with specific interest groups, such as professional associations. The MINSAs-UNAN Commission is yet another example of consensus-building, which establishes agreements for health worker training.

2.3.3 Medicines and Other Health Products

The new Law on Drugs and Pharmacies (Law No. 292 of 1998), regulates the manufacture, distribution, import, export, storage, promotion, experimentation, sale, prescription, and dispensing of drugs for human consumption, as well as cosmetics and medical devices. In addition, the Law regulates the selection, evaluation, and marketing of these products, as well as their quality control, sanitary registration, and rational use. Moreover, the Law provides specific guidelines for the operation of pharmaceutical establishments, describes the responsibilities of owners, and establishes the pertinent violations and sanctions.

The pharmaceutical drug market in Nicaragua lacks controls on drug imports and on the prescription and sales of drugs. The market is influenced by aggressive promotion practices on the part of distributors and manufacturers, a regulatory authority that does not exercise control over profit margins, and lack of price competition in the marketplace. This is because the Ministry of Industry and Trade Promotion (MIFIC) sets the prices on each drug individually, based on the CIF (cost-insurance-freight) price reported by the importer instead of prices for equivalent products. In addition, cultural factors and disinformation cause the population to use drugs inappropriately, resulting in the uncontrolled emergence of pharmacies and other points of sale in markets, supermarkets, and convenience stores.

The Ministry of Health has established the Pharmaceutical Drug Center Information Center (CIMED) to promote the appropriate use of pharmaceutical drugs through enhancing the management of drug therapy information, and using this information for decision-making at individual public health establishments. Specifically, CIMED concentrates its efforts on the production and dissemination of independent scientific research on drug therapies for use by decision-makers and prescribers. CIMED also works to strengthen the capacity of these actors to identify, evaluate, and implement the best biomedical evidence available.

MINSa has developed a list of essential drugs, published by their generic names. The list is reviewed every two years. The INSS has a mandatory list of essential drugs that EMPs must provide to beneficiaries.

The agencies of MINSa responsible for regulating the procurement and distribution of essential drugs are its Procurement Department, the Medical Supplies Center (CIPS), and the Health Inputs Supply Bureau. The Ministry of Industry and Trade Promotion is responsible for the national drug pricing policy.

2.3.4 Equipment and Technology

Inventories show that MINSa health units at the first level of care have 1,682 items of medical equipment, of which 75% are in working order. According to the 2001 Survey of Nicaraguan Medical Establishments, 100% of health centers, both with and without hospital beds, have refrigerators, cold boxes, and vaccine carriers for immunization; however, only 61% of health posts have refrigerators, 28% cold boxes, and 82% vaccine carriers. Regarding communications equipment, two-thirds of health centers with hospital beds have radios and telephones, whereas one-third of health centers without hospital beds and fewer than 25% of health posts have them.

Emergency transport service is available at two-thirds of the county's health centers with beds, and only at 3% of health posts. With regard for basic equipment for maternal and child care, the same survey found that only 32% of health units at the first level of care have equipment and material sterilizers; only 2.6% have equipment to implant intrauterine devices (IUDs); only 4.9% have delivery care equipment; only 10.2% have the equipment required to perform minor surgeries; and only 5% has the appropriate equipment to administer oral rehydration.

With respect to laboratory services, it is hard to find a complete laboratory with the necessary basic equipment to perform quality work. There is not enough equipment at the first level of care to meet health care needs, despite investments made in recent years. Beyond weaknesses in laboratory services, there are also equipment shortages in diagnostic areas such as radiology and ultrasonography. This technological equipment is in a state of deterioration or being used long after its useful life, due to the lack of funding needed to properly maintain it.

There are an estimated 7,705 hospital medical equipment systems, of which 73% are functioning properly, 9% irregularly, and 18% is out of service. Limitations have been identified in laboratory diagnostic equipment, as well as radiology and office equipment. Hospitals have contracts for equipment maintenance; however, only 20% of contractors have the needed technical qualifications to appropriately maintain it. With respect to the surgical field, there is a lack of anesthesiologists, and too few surgeons in areas such as neurosurgery, traumatology, and urology.

In the private sector, the 2001 Survey of Nicaraguan Health Establishments found that with regard to the basic equipment necessary to provide primary care, only 38% of establishments have refrigerators, 6.9% have cold boxes, 34% have vaccine carriers, 9% have radios, 87% have telephones, and 33% have emergency medical transport. No data is available on the level of private hospital technological development or investments in these services.

2.3.5 Quality of Services

The General Health Law and its Regulations mandate the implementation of the Quality Assurance System, comprised of a set of guidelines to promote and guarantee quality in the management and delivery of health services, with a view to maximizing benefits and user satisfaction with lower costs

and risks. It includes the licensing and accreditation of health establishments; health care quality audits; regulation of health professionals; and establishment of bioethical tribunals.

Health care audits are preventive and corrective in nature; they include systematic evaluations of clinical files and approaches to improve the quality of care. As preventive actions increase, the corrective component of these audits will likely decline.

Monitoring, supervision, and evaluation tools have been developed in various program areas. These are applied at the local level and guide implementation of appropriate measures with a view to improving outcomes. These tools include: manual on monitoring, supervision, and evaluation of comprehensive child care; guidelines for monitoring the population who has not sought prenatal, childbirth, puerperium, and newborn care; guidelines for monitoring first level of care units; and hospital guidelines for quality pregnancy, childbirth, puerperium, and newborn care.

Semiannual user satisfaction surveys are administered in the various health establishments. These surveys are conducted in accordance with the methodology set forth in the manual to assess the satisfaction of external users of the health units, from its application, analysis, and decision-making, which include community participation.

Other mechanisms have also been identified, such as providing boxes for complaints and suggestions, and, more recently, the establishment of an office to manage complaints at the health units, which are accessible to the population.

Some standards, such as those for trained human resources (which are included within the Human Resources Development Plan based on education and training needs for improving the population's quality of care) apply the performance evaluation methodology, which is primarily carried out by the area of Human Resources Development. Performance evaluations are carried out every three to six months. The evaluation period is defined for each instrument.

2.4 Institutional Mapping of the Health System

Functions	Steering Role		Financing	Assurance	Provision
	Conduct/Lead	Regulation			
Organizations					
Central government	x		x	x	
Ministry of Health	x	x		x	x
Ministry of Justice		x			
Armed Forces					x
Social security institutions			x		
Regional governments (provincial, departmental)			x		
Local governments (district, municipal, etc.)			x		
Non-profit private insurers					x
For-profit private insurers					x
Non-profit private suppliers					x
For-profit private suppliers					x

3 Monitoring Health Systems Change

Nicaragua has been reforming its health sector since 1991. These reforms have included significant milestones, such as the enactment of the General Health Law (2002), the Regulations to the General Health Law (2003), National Health Policy 2004-2015, and the National Health Plan 2004-2015.

The health situation analysis carried out by MINSa in 2003, to guide formulation of the National Health Policy and National Health Plan, revealed inequities in the access to, and financing of health services. The health situation was marked by enormous inequities in the poor and isolated segments of the population, as well as a haphazard, under-financed health sector that was implementing a model of care that did not adjust to the growing needs of the population.

In order to implement the National Health Plan, the health system introduced a new care model, in keeping with the objectives of equity in health. The Comprehensive Health Care Model (MAIS) has been defined by law as “the set of principles, standards, provisions, systems, plans, programs, interventions, and instruments for the promotion, protection, recovery, and rehabilitation of health, centered on the individual, the family, and the community, with actions targeting the environment, and coordinated with synergy, in order to effectively contribute to improving the standard of living of the Nicaraguan population” (Regulations to the General Health Law, Article 38). However, the MAIS has yet to be implemented.

In accordance with the government’s health policies, a model of family and community health has been designated. This model includes guidelines for citizens to demand their right to health.

3.1 Impact on the “Health Systems Functions”

Institution-building activities of the Ministry have included two components that have had a real impact on its operations: (i) the decentralization of Ministry financing; and (ii) decentralization of services management, by means of outsourcing contracts.

➤ Decentralization of financing

This objective of this component of health reform is to transfer responsibility for budget formulation and implementation to the regional and operational units, as well as to strengthen their strategic planning capacity. The process is limited to the formulation and implementation of the budget.

Most of the income received by the operational units is in the form of public funds transferred to them from the Ministry of Finance. A small portion of their income is “self-generated” from the sale of services, both to the public⁹ and the INSS, for the health care of insured beneficiaries. In the past, resources from the Ministry of Finance were budgeted entirely at the headquarters of the Ministry of Health, and the operational units were free to use their “self-generated income” as they saw fit.

Today, the operational units prepare their budget proposals for funds allocated by the Ministry as well as their self-generated income, within the framework of a comprehensive planning process. This means that all self-generated income flow into a single fund and, consequently, all established budgetary procedures apply to the use of these resources. While this has improved budgetary controls it also limits flexibility in how these resources are used.

⁹ The sale of services to the public has been suspended since 2007. All MINSa services are free of charge, including drugs.

Instruments are in place for provider units to exercise budgetary controls and to facilitate the transfer of funds from some allotments to others with relative flexibility; little by little these powers are being assumed.

This process has been successful: the new budget strategy has been implemented in all 52 implementing units, and has helped to strengthen the corresponding administrative units. The result has been a significant increase in budget implementation capacity of these institutions, as well as more transparent budgetary controls. Nevertheless, significant limitations persist.

First, although the preparation of budgets and Annual Operation Plans (POAs) has been integrated, this is not the case with respect to the negotiation of outsourcing contracts, which occurs in a different accounting year and without consideration of the POAs by the central authorities. As will be observed further on, in recent years outsourcing contracts have become the main instrument for guiding the development of health care provider establishments (e.g., SINAI, hospitals, clinics and health centers), whose efforts focus on achieving their own priorities.

One challenge facing the Ministry is how to integrate outsourcing contracts with its annual budget planning and preparation. This, however, would require even more profound changes in its structure and administrative processes, such as the development of a cost accounting system to help the Ministry better project the return on resources spent throughout the network, a more radical separation between the services delivery function and the procurement function to help allocate resources based on the optimization of results, and make additional headway in terms of transferring authority and responsibilities to health service provider establishments.

Secondly, although health care provider establishments have been actively incorporated into the budget preparation process, the real decision-making power of these establishments is hampered due to their structure and institutional commitments. Approximately 92% of budget allocations to these establishments are for areas over which they cannot exercise much control (65% personnel services, 10% basic services, and 17% medical inputs), and only 8% correspond to operating expenses that allow for some type of decision-making capacity. Practically all payments are processed by the central administration and made directly by the Ministry of Finance through the National Treasury. Only 30% of operating expenses—or less than 2.5% of the budget—are directly processed by health care provider establishments. This is done through a revolving fund that is periodically reimbursed upon the presentation of the pertinent documentation.

The main consequences of this budgetary structure and the way payments are processed are that budgets continue to be based on historic allocations and thus, budget implementation is inflexible.

➤ **New management model**

In 1991, MINSA embarked on reforms of its health services management model, based on regionalization and subdivision by health area. Its objective was to migrate to the Comprehensive Local Health System or “SILAIS” approach, whose structure is adapted to the political/administrative divisions of the departmental and municipal levels. The SILAIS represent an intermediate unit between the central administration and health care provider establishments. At first, the SILAIS were responsible for health centers and health posts, but have gradually assumed responsibility for clinics and hospitals in their departments.

Beginning in 2000, this process overlapped with the introduction of outsourcing contracts, which have become a key instrument in the reform and modernization of the Ministry and its network. In 2003 outsourcing contracts were signed with 6 SILAIS and 8 hospitals; by 2004 outsourcing contracts were reached with 17 SILAIS and all hospitals. In turn, the SILAIS signed agreements with 45 municipal health centers in 2003, and with 152 health centers by 2004. That year marked a significant change, since beginning in 2004 no agreements were signed between the central administration and hospitals, but rather between the SILAIS and hospitals, which served to strengthen the SILAIS as local planning units and helped prepare the ground for advancing decentralization efforts. Moreover, it is becoming general practice for the directors of health

establishments (especially hospitals) to sign outsourcing contracts with authorities of different services.

Outsourcing contracts are an instrument that is transforming the practices of health care provider establishments through a new set of incentives. In an outsourcing contract for the procurement of services, the financial management risks are transferred to the business unit and that unit's incentives tend to be aligned with financial results. Consequently, the buyer links payment to a series of production and service quality indicators. In turn, solid information and oversight systems must be developed to comply with these indicators.

The content of outsourcing contracts is improving. Originally, these contracts focused almost exclusively on process goals; for example, the implementation of training programs, the formation of certain committees, or the preparation of given procedures, instead of goals based on production and results. Over time, production commitments (amount of benefits) and quality indicators (indicators of benefit quality) have been introduced, in addition to management and organizational indicators. The implementation of new registration procedures has become necessary, and, consequently, a deterioration of some indicators has been observed due to the fact that many events were either not registered or improperly registered.

➤ **Insurance**

A plan was implemented in Nicaragua specifically designed to increase health services coverage of the poorest segments of the population, with emphasis on rural areas, known as the Supplementary Social Fund initiative. The initiative included immunization activities; control of cervical cancer; control of malaria and dengue; the deployment of nurses to rural areas; and free access to drugs. These benefits were identified in coordination with different agencies of the Ministry of Health, who established the initiative's priority criteria based on the health status of the population, levels of poverty, access to health services, and available human resources for health.

3.2 Impact on the “Guiding Principals of Health Sector Reforms”

3.2.1 Equity

➤ **Coverage**

The Nicaraguan Government is the country's main provider of preventive health care services. This preventive care is coordinated through a network of health centers and health posts located throughout the country. Supporting this network of primary care establishments is a set of programs that provide basic health services that are financed by different international cooperation agencies, especially NGOs. These NGOs implemented a reform project of activities to improve maternal and child health in rural areas.

The general objective of this reform is to reduce morbidity and mortality among children under 5 and women of childbearing age. The reform is designed to strengthen local capacity for the delivery of MINSA health services and members of local communities who traditionally provide health services, such as midwives and volunteers, but primarily women, by emphasizing their responsibility for decision-making to ensure the health of the family. These interventions are based on MINSA's Program of Comprehensive Care for Children and the Program of Childhood Illness Care. Another means of improving health coverage is promoted by most of the SILAIS through the “mobile medical brigades” or “mobile comprehensive care units” which have been operating for more than a decade now, dispatching teams of health workers to visit remote areas.

In 2006, Nicaragua aimed to increase coverage through its Comprehensive Health Care Model (MAIS), which would have provided care to the population at different stages of the life cycle: childhood, adolescence, youth, adults, and the elderly. This model was included within the General

Health Law; however, it was never implemented. The Government of Reconciliation and National Unity has designed a new “Family and Community Health Care Model.” At present, general preparations and the training of health workers at the different levels of care are under way before the model is launched.

3.2.2 Social Participation

Citizen participation in the public administration is a constitutional right guaranteed in Articles 50 and 51 of the Constitution, which establish that all citizens are entitled to participate on equal terms in public affairs and public administration. Article 59 of the Constitution states that: “the State is responsible for directing and organizing programs, services, and health activities, and for promoting citizen participation in defense of these actions.”

With respect to health system reform in Nicaragua, two types of citizen participation were defined: social and community. Social participation is understood as increasing the role of different social actors in order to improve the health of the population. Accordingly, multisectoral commissions were established to ensure the participation of different health-related sectors (e.g., city halls, the Ministry of Social Action, and the Ministry of Health) and the health councils (municipal and national), which include representatives of the business community, community associations, unions, NGOs, legal societies, and churches, among others.

Citizen participation in the management of the sector is one of the processes under consolidation at the national level through the National Health Council but with greater emphasis on the local levels. In the SILAIS the Health Councils have been formed with different degrees of citizen participation (based on the characteristics of every department or Autonomous Region of the Atlantic); participation from delegations of different governmental institutions is also available in accordance with the General Health Law.

The health councils operating at the municipal level have witnessed the most development in this regard. Here, the country has made good progress and there is palpable citizen participation in the management of the health sector. In rural areas, these processes are coordinated in community development committees, which primarily focus on meeting the basic needs of the population (e.g., water, sanitation, and energy projects), and have different degrees of success in terms of self-management of these projects. These activities are closely coordinated with local governments through town and city halls, which serve as intermediaries between municipal governments, government cooperation agencies, and NGOs. These social networks provided a valuable source of support during the aftermath of Hurricane Mitch.

Since being seated in 2007, the new government has been promoting “democratic governance,” which requires active citizen participation. It is hoped that this approach will give rise to sweeping changes in society, based on the recognition of its capacity to exert power and promote the ethical and moral values required for comprehensive human development.

Democratic governance is a model of direct democracy whereby the population participates in public decision-making, management, and the evaluation of government policies. This is achieved by consultation with different trade associations, such as small- and medium-scale industry, small and medium producers, the coffee growers’ association, big business, and political and civil society actors, through the work of councils, and regional and sectoral decision-making bodies of citizen power.

This model of direct democracy calls on the population to participate in the planning and implementation of public policy, in the monitoring and control of local and national budgets, as well as to weigh in on the efficiency and honor of civil servants. This right is exercised through legal instruments such as the enactment of the Law on Access to Public Information, to which the State is committed to strictly enforcing.

3.3 Analysis of Actors

Actors and Interventions

Institutions	Objectives/Functions
MIFAMILIA, INSS, international cooperation, and National Army	Reduce the gap in access to essential health services of the poor and extreme poor, especially vulnerable groups such as women of childbearing age, children, and adolescents of rural areas with difficult access.
FISE, city halls, and international cooperation	Concentrate financial resources on implementing a national program of investment to maintain and expand health unit infrastructure and to modernize health unit equipment. Train human resources in the management of health services equipment.
City halls, MARENA, INIFOM, FISE, NGOs, and communities	Establish continuous monitoring for the final disposal of household liquid and solid waste, as well as industrial contaminants in all municipalities.
MARENA, city halls, NGOs, and communities	Protect water resources and control/prevent biological, chemical, and physical contamination with community, city hall, interagency, and intersectoral participation.
SINAPRED with MINSA, Civil Defense, MECD, MIFAMILIA, city halls, NGOs, and communities	Strengthen the capacity of health sector agencies in national disaster prevention, mitigation, and preparedness, promoting community, municipal, interagency, and intersectoral participation within the framework of Law No. 337 and its Regulations.
SINAPRED, FISE, MIFAMILIA ENACAL, city halls, NGOs, and communities	Protect and ensure the safety of sanitary infrastructure in disaster situations.
INSS, MIGOB, National Army, universities, and international cooperation	Develop leadership skills of high-level administrative personnel of the health sector through training in management, negotiating skills, team building, etc.
MHCP, SECEP, and Ministry of Foreign Affairs	Design and implement a system for monitoring the execution of external funding.
INEC, Central Bank, INIM, NGOs, and health sector institutions	Develop MINSA institutional capacity for the procurement of services function and strengthen the INSS. Develop national health accounts with intra- and inter-sectoral participation, and breakdown this data by gender and department.
SECEP and international cooperation	Develop and adequately incorporate knowledge and research on scientific and technological advances, based on the needs of the country and the transfer of technologies adapted to local conditions.

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