HONDURAS

OVERVIEW

The Republic of Honduras has an area of 112,492 km^2, consisting of predominantly mountainous terrain interspersed with 19 river basins. In 2000, it had an estimated population of 6,194,926, with a density of 55 inhabitants per km^2 and an annual population growth rate of 2.8%. Some 44% of the total population lives in urban areas, and the proportion of women is 49.6%. Administratively, the country is divided into 18 departments, 298 municipalities, over 3,000 towns, and more than 27,000 caseríos (settlements consisting of fewer than 1,000 inhabitants).

The age distribution of the population reveals a preponderance of young people: 43% is under 15 years of age, and 21% is between 15 and 24 years (Figure 1). Nine different ethnic groups have been identified in the country; together, they represent approximately 12% of the total population, living in poverty in scattered and remote areas.

For the past two decades Honduras has been engaged in a transition to formal democracy, and throughout that period it has basically been faced with two major stumbling blocks: on the one hand, obstacles stemming from the country's ancestral problems of poverty, unemployment, and its deficiencies in housing, education, and health, and on the other, the institutional weakness of bodies that are of key importance to the strengthening of democracy. During the final years of the century just past, the economy was characterized by a marked dependence of the gross domestic product (GDP) on exports of goods and services, with little growth of domestic consumption. In 1999, the GDP registered a drop of 1.9% from its level of the previous year owing to the effects of Hurricane Mitch, which devastated the country in October 1998. The damage to the economy was reflected in a 4.6% reduction in per capita GDP, and it would have been much greater had it not been for international aid, particularly in the form of major donations and loans and the deferral of payments on the servicing of the foreign debt. Figure 2 shows the trend of the GDP between 1991 and 2000.

The worst effects of Hurricane Mitch were felt in the agriculture and livestock sector, where production declined 8.7% and led in turn to a major fall in exports (–9.4%). In this sector, the crop that suffered the worst damage was bananas, where the production level dropped 77%, followed by plantains (72%), rice (53%), beans (41%), and coffee (11%). Activity in the livestock sector fell off 2.8% and in fisheries, 1.3%, mainly because of a decline in shrimp-raising (4.2%). The economic program for the 1999–2001 period included structural State reforms principally aimed at privatization, modernization, and improved efficiency of the public sector, as well as strengthening of the financial system.

The country's geographic and demographic areas experienced unequal rates of growth in 1995–2000. Support channeled to productive agro-industrial areas served to build up a strong "agro-industrial corridor" in the central third of the country, while the remaining two-thirds were bypassed. In a comparison of the relationship between the monthly cost of the basic food basket and the corresponding per capita wage, it was found that paying for the food basket in 2000 would have required 2.3 wages per capita in rural areas and 2 in urban areas. In 1999, a significant portion of impoverished households headed by women (23.7%) were concentrated in the country's two most populous cities: Tegucigalpa (37.7%) and San Pedro Sula (41.3%).

In the industrial sector, *maquiladoras* continued to generate employment: according to figures reported in September 2000 by the Honduran Maquiladora Association, this industry generated a total of 125,000 direct jobs, 72% of them held by women. The indirect benefits of employment in *maquiladoras* reached 1.2 million persons, counting both dependent family members and suppliers of services (food, transportation, etc.) to employees. Furthermore, it is expected that the number of jobs created by this industry will grow in tandem with increased benefits under the preferential trade systems established within the framework of the Caribbean Basin Initiative.

Mortality

Because of the limitations on the availability of continuous records over the last decade, Honduras has turned to the use of surveys; however, these studies have been carried out at different times and have used different methodologies and degrees of

representativeness in the sampling, so that comparisons and analysis are difficult, as is the measurement of inequalities. According to Ministry of Planning estimates, the crude mortality rate in 1996 (the most recent year for which information is available) was 5.8 per 1,000 population, with a total of 32,666 deaths, of which 18,510 corresponded to males and 14,156 to females. Fifteen percent of all the deaths were reported by hospitals.

The Bureau of Statistics and Census estimated 47% underregistration of mortality in 1999. That same year, the leading causes of registered mortality in the public health establishments were diseases of the circulatory system (986 deaths), accidents (569), malignant neoplasms (249), AIDS (236), and tuberculosis (134).

HEALTH PROBLEMS

By Population Group

Children (0–4 years)

In 1998, this group represented 15% of the total population. The National Epidemiology and Family Health Survey of 1996 (ENESF-96), using the indirect method, estimated infant mortality for 1991–1995 at 36 per 1,000 live births. Because of the different procedures used to arrive at the calculations, it is difficult to compare this rate with the 42 per 1,000 live births estimated by the indirect method in 1993. According to the survey mentioned above, neonatal mortality accounts for more than half of all infant mortality in the country (53%), while acute respiratory infections and diarrhea with dehydration are the two leading causes of death in children under 5 years old.

Ministry of Public Health hospital statistics for 1999 indicate that respiratory distress syndrome of newborn was the leading cause of death in infants under 1 year (12.2%), followed by bacterial sepsis of newborn (6.5%), with a total of 1,888 reported deaths. The predominant group of causes in children under 5 years of age was infectious diseases, especially respiratory infections (24%) and intestinal infections (diarrhea with dehydration) (21%).

Schoolchildren (5–9 years)

According to 1998 projections by the United Nations Population Division, children between 5 and 9 years of age represented 14% of the total population. In partial results from a specific study of deaths, the Bureau of Statistics and Census reported that there were 375 registered deaths in this age group in 1994, which corresponded to 2.3% of all deaths in the country (16,019).

As provided in the Constitution of Honduras, primary education is the only level of education that is compulsory, and it is free of charge for children 6–12 years of age. The Ministry of Public Education estimated that during 1998–2000 primary enrollment increased at an annual rate of 1.3%, reflecting the incorporation of some 13,000 new pupils a year. It has been calculated that in 2000 school coverage was 96% at the primary level, with a recidivism rate of 8% and an estimated dropout rate of 3%. The Ministry of Education has determined that in 1999 only 35% of those who completed the primary cycle went on to the secondary level.

Adolescents (10–14 and 15–19 years)

In 1998, this age group represented more than one-third of the country's total population (33.5%). Data from the Bureau of Statistics and Census for 1999 indicate that 66% of the nation's economically active population (EAP) consisted of adolescents 10–19 years old. That same year, the Bureau of Criminal Investigation reported that there were more than 400 gangs, with some 26,000 members, most of them adolescents and youths (80%). A 1996 study conducted by the National Institute for the Prevention of Alcoholism, Drug Addiction, and Drug Dependency, which surveyed 1,631 students 14–24 years of age at 12 secondary schools in different parts of the country, found that 42% had used alcohol at least once, 17% had smoked, 17% had taken stimulants in pill form, 2% had tried marijuana, and 0.7% had used cocaine.

Ministry of Public Health statistics for 1999 on all hospital care provided by public establishments show that out of 215,611 discharges from hospitalizations for all causes, 17% of the patients were adolescents (10–19 years of age). Of all adolescent discharges, 47.8% of the hospitalizations were for conditions involving the female reproductive process, and of all care related to pregnancy, childbirth, and the puerperium, 27% was provided to adolescents. According to the same source, the second most frequent hospital discharge diagnosis in this age group was violent acts (mainly injuries and poisoning) and the third leading diagnosis was diseases of the digestive system.

According to ENESF-96, adolescent girls aged 15–19 had a fertility rate of 136 births a year per 1,000, compared with 243 births a year per 1,000 women aged 20–24. The survey also revealed that 20% of the women aged 15–24 had had their first sexual encounter before they were 15 years old, and 51% before they were 18. The National Male Health Survey 1996 (ENSM-96) found that more than 75% of those interviewed had had their first sexual encounter before they turned 18. From ENESF-96 it was learned that only 6% of the women 15–24 years of age had used some form of contraception in their first sexual encounter, but among women aged 15–19 who were living in a consensual union, 27% used some method of family planning.

The Ministry of Public Health's Division of Sexually Transmitted Diseases and AIDS reported a cumulative total of 11,789 confirmed cases of AIDS as of December 2000, and one-fifth of all the cases (2,226) corresponded to the population between 10 and 24 years of age. Hospital records show that there were 156 deaths in the adolescent population in 1999, more than 50% of which were attributed to "external causes of morbidity

and mortality," a figure that reflects, in part, the limitations of the country's death records.

A study of deaths in women of reproductive age conducted by the Ministry of Public Health in 1997 found that maternal mortality was almost four times greater in girls aged 12–14 years (391 deaths per 1,000 live births) than in the overall population of women of reproductive age (108 per 1,000 live births).

Adults (20–59 years)

According to the population projections for 2000, persons between 15 and 59 years of age represented more than half (53%) the country's total inhabitants. According to statistics from the Ministry of Public Health for this age group in 1999, women accounted for three of every four hospital visits and discharges. In the case of almost half the discharges (48%), the care provided was directly related to the female reproductive process (pregnancy, childbirth, and the puerperium), and these cases corresponded to 66% of all female discharges. ENSM-96 found that only 50% of the male respondents 15–60 years of age had consulted a state health service at least once a year. The survey results also indicated that 50% of Honduran women between 15 and 44 years old living with a sexual partner in a consensual union practiced contraception, while 39% of those aged 20–24 years living with a partner used contraceptive methods, and among those 35–39 years of age the percentage was 58%.

Hospital statistics show that as of December 2000 a total of 11,789 confirmed cases of AIDS had been registered in Honduras, of which 90% were in patients between 15 and 59 years old, and 61% were in males. The only information available on maternal mortality comes from studies conducted in 1990 and 1997, but they were based on different methodologies and the results are not comparable. The 1997 study found a maternal mortality rate of 108 per 100,000 live births. Of the deaths studied, 47.7% occurred at home, compared with 35% in State-run hospitals, with the remaining percentage in private institutions. Almost half the deaths (47.1%) were due to hemorrhagic complications in the third trimester of pregnancy, followed by hypertensive disorders of pregnancy (preeclampsia and eclampsia), 19%; infections, 15%; and other causes.

The Elderly (60 years and older)

As of 1999, 6.2% of the total estimated population corresponded to adults aged 60 and over, of whom 41% were living in urban areas and 59% in rural areas. The Multipurpose Household Survey conducted in 1999 found that 28.2% of older adults were widows and widowers—22.7% women and 5.4% men. More than half the older adult population (52.6%) were illiterate, and the proportion was larger among women (57.4%).

Ministry of Public Health statistics for 1999 indicate that 10.2% of outpatient consultations in the public health system corresponded to older adults, an increase of 0.5% relative to 1997. Mortality data by cause of death are not available for this segment of the population.

Workers' Health

Data for 1999 from the ongoing Multipurpose Household Survey conducted by the Bureau of Statistics and Census show that jobs had increased at a rate of almost 5% a year, or faster than the growth of the economically active population, thus raising employment levels in the workforce. As a result, unemployment was only 3.7% in 1997–1999. At the beginning of the 1990s the EAP numbered 1.6 million, and by the end of the decade it had reached 2.4 million. This rise of almost 50% was due especially to the steady increase in the participation of women in the labor market, which went from 32.2% in 1996 to 39.1% in 1999, while the rate for males saw very little change. Seventy-five percent of the country's workers were illiterate or had only attended primary school. On 1 October 2000 a new wage agreement went into effect that provided for increases in the minimum wage for certain income brackets, economic activities, and businesses, based on their size.

The Disabled

The Ministry of Public Health estimates that more than 1 million Hondurans have some degree of physical or mental disability. Although some data have recently been gathered by the public and private health services, as yet no consolidated official information is available on mortality and morbidity in this population.

Indigenous Groups

There are more than 1 million Hondurans of indigenous or black descent, living as nine culturally differentiated peoples: the Lenca, Chortí, Tolupán, Tawahka, Garífuna, Pech, Nahuatl, Miskito, and the English-speaking blacks. Their languages come from five basic linguistic trunks: the Mayan, Ute, Aztec, Hokan-Siouan, and African. These populations are dispersed throughout the national territory, usually in neglected areas, and large numbers are concentrated near international borders. The Miskito and Chortí live along the border with Nicaragua and Guatemala; the Lenca, one of the most numerous groups, near the border with Guatemala and El Salvador; the Garífuna, English-speaking blacks, Miskitos, Tawahka, and the majority of the Tolupán communities, along the Atlantic coast; and the Pech and Nahuatl, in the central area in the department of Olancho. Approximately 50% of the indigenous people live in coniferous forest regions, while 30% are found along the coasts and 20% inhabit the Tawahka Reserve and the Río Plátano Biosphere Reserve.

The average monthly income of an indigenous household is US$ 60, but for the Lenca, Pech, Tolupán, and Chortí it is only US$ 20 (a very low figure compared with the national average, which was estimated at US$ 82 in 2000) and during lean times many families subsist by hunting, fishing, and collecting roots and fruit

in the forests. The economic situation of the Garífuna and the English-speaking blacks is somewhat better, since they have access to work related to large-scale fishing.

Although specific information about these groups is not available, it can be said that their health status reflects their marginalized situation, lack of access to basic services, and limited social participation, especially in the case of the Lenca, Tolupán, Tawahka, Miskito, Nahuatl, and Pech. Their living conditions are worsened by their geographical isolation and limited access to water supply and basic sanitation services, among other factors. The Garífuna, Miskitos, and Tawahkas live in coastal tropical rainforest and lowland areas and have a high frequency of malaria and other communicable diseases.

The Garífuna and English-speaking blacks are the groups most affected by HIV/AIDS. Between September 1998 and February 1999 the Ministry of Public Health conducted an exploratory transversal seroepidemiological study of 310 individuals (134 men and 176 women) from Garífuna communities in the department of Atlántida (Bajamar, Triunfo de la Cruz, Corozal, and Sambo Creek) and found the following percentages of seroprevalence: syphilis, 2%; hepatitis B, 29%; HIV, 8%; and other sexually transmitted diseases, 38%. In a subsequent survey, conducted in 2000–2001 among 160 women of reproductive age in the same communities, the seroprevalence rates were as follows: syphilis, 1%; hepatitis B, 34%; HIV, 13%; and other sexually transmitted diseases, 9%.

By Type of Health Problem

Natural Disasters

Honduras is especially vulnerable to natural disasters. The departments of Cortés, Atlántida, Gracias a Dios, and Islas de la Bahía, inhabited by 21.4% of the population, are exposed to hurricanes and floods; the departments of Yoro, Francisco Morazán, Comayagua, Lempira, Intibucá, and Santa Bárbara, with 44.4% of the population, are at risk for floods and mudslides; and the departments of Valle, Choluteca, La Paz, and El Paraíso, with 14.3% of the population, tend to have droughts, floods, and earthquakes. In addition, forest fires are very common.

In the last four years Honduras was struck by two major disasters: Hurricane Mitch and its aftermath in October-November 1998, and a severe drought in 2000, which affected more than 85,000 people in the southern region of the country (Choluteca, Valle, La Paz, Francisco Morazán, and El Paraíso). Hurricane Mitch unleashed torrential rains (more than 600 mm in just five days), producing floods across 11 of the country's 18 departments and affecting 1.5 million inhabitants, with a death toll of 5,657 deaths plus 8,058 people unaccounted for and 12,272 injured. More than 285,000 lost their homes and were forced to take refuge in 1,375 temporary shelters. It is estimated that 60% of the country's roads were damaged, cutting off communication with more than 81 cities. Of the country's 28 hospitals, 23 had partial or total breakdowns in their water distribution systems; in addition, 123 health centers were damaged, and 68 of them had to close down. The economic damage to the health services network in terms of both direct and indirect costs was calculated at US$ 62 million. According to ECLAC estimates, national losses associated with Hurricane Mitch amounted to almost US$ 3,800 million—equivalent to 70% of the GDP, or close to 100% of the foreign debt.

According to data from the weekly epidemiological register, which compiles information on cases of notifiable diseases reported by the Health Service Production Units throughout the country, by the fifth epidemiological week of 1999 there was a cumulative total of 1,059 cases of classic dengue and 4 cases of hemorrhagic dengue, compared with the two weeks prior to Hurricane Mitch, when the weekly reports were down to 200 cases. After Hurricane Mitch there were three reported cases of cholera, one of them confirmed both clinically and epidemiologically; and in 1999 there were another three, one from Mosquitia and two from Santa Bárbara. By the end of the fifth epidemiological week of that year a cumulative total of 23,464 cases of diarrhea had been reported.

Leptospirosis appeared in Honduras for the first time in the wake of Hurricane Mitch, with an outbreak of 172 cases, 28 of them confirmed in the laboratory and the rest diagnosed clinically or epidemiologically, and 7 deaths. The outbreak was controlled by surveillance and epidemiological monitoring, which has also made it possible to detect outbreaks of diseases with the potential to cause epidemics, such as malaria, dengue, and diarrheal diseases.

As a direct consequence of the floods that followed Hurricane Mitch, the central markets of Tegucigalpa were contaminated by a sewage backflow, the result of heavy damage to the drainage system that runs through the city's main cloaca. However, the most serious risk factor contributing to the outbreak of foodborne diseases was the population's lack of knowledge about hygienic practices. Coordination between the various agencies following Hurricane Mitch made it possible to meet the population's needs in an integrated and effective manner, thus strengthening the bases for the response of the United Nations system through the group responsible for disaster management.

Vector-borne Diseases

In Honduras, malaria has been considered endemic since the 1950s, when a program was set up to eradicate it. Because the exact number of cases that occur each year is unknown, calculations are based on the number of positive laboratory samples (thick blood slides) reported by the Ministry of Public Health's malaria laboratory network. In 1997, a total of 373,364 thick blood slides were examined, of which 91,799 (24.6%) were diagnosed as positive. However, in 1998 only 250,688 slides were examined, or one-third fewer than the year before, and of this num-

ber, 44,337 (17.7%) were positive, with an annual parasite index (API) of 9.25. At the end of 1999, a total of 249,105 slides had been examined and 51,911 (20.7%) were positive, with an API of 10.52. The northern coastal area (department of Colón, Health Region No. 6) continued to have the largest number of malaria cases: in 1999, 36% of all the cases in the country came from that area, followed by Health Region No. 7 (department of Olancho), with 17%. As of the end of 2000, a total of 35,122 cases had been registered in the country as a whole. According to official reports, *Plasmodium falciparum* was implicated in about 5% of the reported cases and *P. vivax* accounted for the rest. However, an independent study conducted during 1998–2000 in the area of Tocoa (department of Colón), based on active surveillance, found that more than 40% of the cases detected were attributable to *P. falciparum*. Although the 35,122 cases reported in 2000 represented a decline relative to 51,911 in 1999, blood studies during the same period were down from 250,411 to 175,577, reflecting a marked deterioration of epidemiological surveillance. Health Regions 6, 7, and 8 had the highest APIs and accounted for 64% of the malaria cases in the country.

Surveillance for dengue is conducted with the assistance of clinical diagnosis. The disease has been persistently endemic in Honduras since 1998, when 28,064 cases were reported and the confirmation of hemorrhagic cases (77 that year) was systematized. In 1999, there were 17,835 cases of classic dengue, 36% less than the year before, and 78 reported cases of hemorrhagic dengue. In 2000, there were relatively few cases up until the end of September, when 13,795 were reported in an epidemic concentrated mainly around Tegucigalpa. Nevertheless, the total number for that year was 23% less than the figure for 1999. Of all the cases in 2000, 30% (4,206) were reported from the Tegucigalpa metropolitan region. There were 308 reported cases of hemorrhagic dengue in 2000 in association with the epidemic, and most of them were in Tegucigalpa. The predominant circulating serotype as of mid-1999 was dengue-3, but from that time to the end of 2000 the primary agent was dengue-2. In 1999, there were 8 deaths from hemorrhagic dengue, for a case-fatality rate of 20%, and in 2000, there were 10 deaths, half of them in the group aged 5–14 years, with a fatality rate of 3%.

In 1998, the prevalence of Chagas' disease was estimated at 7%, and 20% of the chronic cardiopathies diagnosed that year were deemed to be chagasic in origin. Screening of transfusional blood for this disease is compulsory in Honduras. According to the Central Chagas' Disease and Leishmaniasis Reference Laboratory, serologic surveys conducted throughout the country in 1998 and 1999 yielded seropositivity rates of 14.5% and 18.4%, respectively. In 2000, a study of 1,380 cardiopathic cases compatible with Chagas' disease found that the largest percentage of seropositive reactors was in Health Region No. 1 (department of Francisco Morazán), with 60%, followed by Region No. 2 (departments of Comayagua, La Paz, and Intibucá), with 34%, and Region No. 3 (departments of Cortés, Yoro, and Santa Bárbara), with 29.4%. The chief measures that have been taken are: screening of donated blood, entomological surveys to ascertain the infestation indexes of the vectors *Rhodnius prolixus* and *Triatoma dimidiata*, seroprevalence surveys, house-to-house spraying in infested areas, and research.

Documentation is available only on the behavior of cutaneous form of leishmaniasis. In 1996, a total of 1,234 cases were reported, 867 (70%) of them from the department of Olancho (Health Region No. 7). In 1997, there were 1,208 registered cases, and in 1998 there were 991, with a significant percentage again concentrated in Olancho in both years. In 1999, only 694 cases were reported, 340 (49%) of them from Health Region No. 7 (Olancho). No explanation has been offered for the decline in incidence, which according to the Department of Vector-borne Diseases in the Ministry of Public Health, went from 22.0 per 100,000 population in 1996 to 10.1 per 100,000 in 1999. Action has mainly taken the form of diagnosis and treatment of cases, passive surveillance, training, and research.

Diseases Preventable by Immunization

There have been no cases or suspected cases of polio since 1989. During 1998–2000, vaccination coverage against this disease in children under 2 years old was over 90%. The last clinical case of measles was reported in 1996, and no mortality from this disease has been registered since 1991. Vaccination coverage of children under 2 years old was 98% in 1998–2000. Figure 3 shows immunization coverage of infants under 1 year in 2000.

Coverage with DPT (diphtheria, pertussis, and tetanus) vaccine in the population under 2 years of age has been at least 94% since 1997. The country has had no reported cases of diphtheria since 1981. Pertussis, however, has exhibited an uneven pattern, with several outbreaks in recent years (more than 648 cases and 28 deaths in 1996–2000). In 2000, 96 cases of this disease were detected, with 1 death. Most of the cases were in infants under 1 year, and of those affected, 25% were under 2 months old. A surveillance system for tetanus was established in 1993, and as of 2000, it had registered a cumulative total of 81 cases. Males over 49 years of age were most affected, with a case-fatality rate of 50%. In 2000, there were no cases of neonatal tetanus.

BCG vaccination coverage to protect against tuberculosis was over 97% except in 1999, when a problem with the vaccine caused the rate to fall to 93%. In 2000, there were only four cases of tubercular meningitis; all were in children under 5 years of age, and two of them had lived with tuberculosis patients.

Rubella was controlled with MMR (measles, mumps, rubella) vaccine from 1997 until 2000, when the program switched to the pentavalent vaccine (MMR, *Haemophilus influenzae* type b vaccine, and hepatitis B vaccine). The change of vaccines and associated logistic coordination resulted in a lowering of coverage, and to compensate, a national immunization day was held in June 2000 for the entire population from 2–4 years of age, regardless of their previous vaccination record, which achieved

coverage levels of over 95%. In 2000, 158 cases of rubella were reported, 94% of them in children under 5 years of age. Surveillance for hepatitis B was initiated in 1996, and from that time until 2000, a total of 208 cases were documented. No deaths have been reported since 1998.

Intestinal Infectious Diseases

Measures to control cholera were stepped up during 1996–2000 in response to epidemics in neighboring countries and the situation following Hurricane Mitch at the end of 1998. In 1997, a total of 90 cases were recorded, most of them from outbreaks in the departments of Cortés, Olancho, and Gracias a Dios. In 1998 (prior to Hurricane Mitch), an outbreak was reported in Mosquitia (department of Gracias a Dios), which accounted for 289 (94%) of the 306 cases recorded that year and caused 12 deaths (case-fatality rate: 3.9%). In 1999, there were only 57 cases and 3 registered deaths (case-fatality rate: 5.3%), and the cases came from the departments of Cortés, Gracias a Dios, and Santa Bárbara. Diagnostic capacity improved substantially beginning in 1999, and the majority of cases were confirmed in the laboratory. Only 15 cases of cholera were reported in 2000, with 3 deaths in the department of La Paz (case-fatality rate: 20%).

Diarrhea was endemic in the population in 1996–2000. During this period, some 200,000 cases were reported annually, 85% (170,000) of them in children and adolescents under 15 years old. The situation was complicated by an increase in reported cases of bloody diarrhea (dysentery): in 1998, there were only 5 cases of dysentery, but the number soared to 2,340 in 1999, and in 2000 there were 1,929. In 1998, 64% (1,496) of the cases were in the population under 15 years of age, and in 2000, the proportion was 72% (1,392 cases). As of the end of 2000, this phenomenon was still being studied and no concrete explanations had been found.

Chronic Communicable Diseases

During 1997–1999, an average of 4,700 tuberculosis cases were registered annually, compared with an annual average of 4,267 cases in 1992–1996. In 1999, nearly 75,000 sputum smears were examined and 4,568 cases of tuberculosis were reported, 56% (2,558 cases) of which were diagnosed in the laboratory and 44% on the basis of X-rays and clinical criteria. The proportion of males was 55%, and the highest rates were in the departments of Gracias a Dios, Cortés, and Francisco Morazán (the last two have the country's largest urban centers and 20% of its population). The occurrence of tuberculosis in association with AIDS/HIV infection increased during 1996–2000. The DOTS strategy (directly observed treatment, short course) has been applied in Honduras since 1998, and in 1999 this approach made it possible to treat and cure 67% of the cases detected that year.

In 1998, the National Leprosy Program was resumed after an interruption of almost two years (1996–1998). By the end of 1998, the program had contacted and followed up on 78 patients, 10 (13%) of whom were still receiving multidrug therapy. In 1999, despite greatly expanded epidemiological surveillance, improved diagnostic capacity, and active case-finding, the number of cases was only down to 72.

Acute Respiratory Infections

Acute respiratory infections have been rising steadily at an average annual rate of 5%. About 90,000 cases were reported in 1996, and by 1998 the figure had risen to 98,790. Surveillance for pneumonia and bronchopneumonia was introduced in 1999, and in that year 78,263 cases were reported, followed by 82,077 in 2000, representing an annual increase of 5%.

Zoonoses

Rabies has been on the decline. Despite higher figures reported in 2000, the number of cases decreased between 1997 and 2000: in 1997, there were 22 cases of canine rabies and 1 case of human rabies; in 1998, there were 7 of canine rabies and none of human disease; and in 1999 canine rabies was down to 5 cases, with 3 in cattle. In 2000, improvements were made in the country's capacity to investigate and document suspected cases, as well as to take, store, and submit samples to a laboratory for analysis, and as a result, there was an increase in the number of cases detected, with the following figures reported at the end of 2000: 15 cases of canine rabies, 3 cases in cattle, 3 in cats, 1 in an equine, and 1 human case. Canine vaccination coverage increased from 50% in 1997 to 68% in 2000.

HIV/AIDS

Of all the cases of AIDS reported in Central America, 60% were from Honduras, and 60% of the country's 11,789 confirmed cases as of December 2000 were from the departments of Cortés (specifically, the metropolitan area of San Pedro Sula) and Francisco Morazán (Tegucigalpa). In addition, 3,419 asymptomatic carriers were reported, making for a cumulative total of 15,208 HIV-positive cases since 1985. In the transmission pattern of the disease, sexual behavior predominates, accounting for 91% of the cases (83% in heterosexuals, 5% in bisexuals, and 3% in homosexuals), while blood transfusions accounted for 1% and mother-to-child transmission, also 1%, with a rising trend in the last-mentioned form over recent years (6.1%). Health Region No. 3 had the largest number of cases (5,520), followed by the Tegucigalpa Metropolitan Region (2,235), Health Region No. 6 (1,641), and Health Region No. 4 (664). With reports now being received from 100% of the departments and municipalities, it can be seen that the epidemic is on the rise in rural areas.

In 2000, the male-female ratio was 1.2 (Figure 4). As of September 2000, 40% of all the cases registered between 1985 and 2000 were in the population aged 25–34 years, and 70% of the patients were between 20 and 40 years old. The period 1998–2000 saw increased measures to combat this disease based

on the First Strategic Plan to Fight AIDS, as well as on national policies aimed at the prevention of HIV/AIDS, which gave rise to creation and approval of the Special Law on AIDS.

Nutritional and Metabolic Diseases

According to the ENESF-96 survey, 96% of the children born during 1992–1996 had been breast-fed at some time, and 42% of those under 4 months old had been breast-fed exclusively, but this practice usually tended to cease at 6 months of age. Ministry of Public Health hospital statistics show that in 1997 the proportion of newborns weighing less than 2,500 g was 9.7%.

Anemia in women of reproductive age affected one in every four women, and one in every three of those who were pregnant. According to the Micronutrient Survey conducted in 1996, 26% of nonpregnant women and 32% of those who were pregnant were anemic. Vitamin A deficiency is a major public health problem: about one in every seven children have subclinical vitamin A deficiency (plasma retinol level lower than 20 mg/dL), and one in every three are at risk for subclinical deficiency (20–30 mg/dL). In the first height census, carried out in 1986, the prevalence of malnutrition was 39.8%, and as of 1997, this percentage had increased to 40.6% at the national level, with 26% corresponding to moderate malnutrition and 14% to severe malnutrition. In 1997, the prevalence of malnutrition by area of residence was 28.5% in urban areas and 57.6% in rural areas.

Diseases of the Circulatory System

No information is available that could be used to assess trends. According to hospital data for 1999, arterial hypertension was the seventh most important cause of morbidity at the national level. In turn, data from the epidemiological surveillance system for that year show that a total of 35,064 services were provided, and the Metropolitan Health Region (Tegucigalpa) had the largest number (9,566), followed by Region No. 6 (5,304), No. 2 (4,475), and No. 1 (4,183).

Malignant Neoplasms

There is no national cancer registry, but nongovernmental organizations keep records on the subject. The Emma Romero de Callejas Cancer Center, one of the best known of these and with the broadest coverage, registered 456 cases in 1998, 67.8% of them in women. Forty-four percent of the patients were residents of the department of Francisco Morazán; 69.2% of the women treated were between 35 and 69 years old; and, of the males, 21% were between 5 and 14 years of age, while 30.6% were between 60 and 79 years. In 1999, this institution treated 406 patients; 64% had been referred by another establishment and were treated at the Center, and of these, 61.2% had been referred by State hospitals and health centers or the Honduran Social Security Institute (IHSS). The most frequent sites of primary cancers in women were the uterine cervix (34.4%) and the breast (17%), and in men the leading sites were the eye, brain, and central nervous system (16%), followed by the hematopoietic and reticuloendothelial system (15%), and the genitals (4%).

The Emma Romero de Callejas Cancer Center reported that it provided outpatient services for 709 patients in 2000. Only 395 of the cases (45% of those treated) were subjected to pathological laboratory analysis for the hospital registry; 68% of these patients were women and 32% were men, and they ranged in age from 40–59 years old. Fifty-three percent of the patients resided in the department of Francisco Morazán (Health Region No. 1). In 1999 and 2000, the Center treated 240 patients for malignant tumors of the uterine cervix, and 86% of them were between 30 and 69 years of age.

Accidents and Violence

The mortality and morbidity records on accidents and violence have not been subjected to systematic review and analysis, and therefore information on the associated risk factors is insufficient. The most reliable data are from the cities of Tegucigalpa and San Pedro Sula.

The Bureau of Forensic Medicine of the Public Ministry estimated the 1999 homicide rate for the San Pedro Sula metropolitan area at 95 per 100,000 population, representing an increase of 11.5% relative to 1998 and 17% with respect to 1997. According to this same source, the accident rate in this area increased from 23 per 100,000 in 1997 to 31 per 100,000 in 1998 and 36.5 per 100,000 in 1999. In the last-mentioned year the suicide rate was 3.5 per 100,000; no information on suicide was available for previous years. The Bureau reported that the Tegucigalpa metropolitan area had a homicide rate of 47.5 per 100,000 in 1997, 57 per 100,000 in 1998, and 51 per 100,000 in 1999. The area's accident rate, according to the same source, was 42.5 per 100,000 in 1997, 37.5 per 100,000 in 1998, and 43.5 per 100,000 in 1999. Suicides in the metropolitan area increased from 8.5 per 100,000 in 1997 to 9 per 100,000 in 1998 and 9.5 per 100,000 in 1999.

A 1999 study of persons treated at the San Pedro Sula Regional Hospital for violence-related injuries revealed that most cases occurred on weekends between 6:00 p.m. and 12:00 midnight. The instrument used most often by the aggressors was a firearm (48%), followed by a cutting or thrusting weapon (38%) and a blunt object (14%), and 86.5% of those injured were men, with a median age of 25 years.

From its creation in 1993 until 1999 the Family Counseling Program dealt with 10,535 cases of family violence, and 9,268 (88%) of the victims were females, compared with 1,267 males. Thirty-six percent of the cases (3,826) were classified as emotional abuse, and females were most affected, with 3,427 cases (32% of them classified as physical abuse). Of the 1,678 cases of sexual abuse (16%), 1,582 affected women. The rest were classified as follows: negligence and abandonment, 159 cases (121 in women); property destruction and economic abuse, 147 cases (all in women); and other types of abuse, 1,386 cases (906 in women).

Oral Health

The Ministry of Public Health services provided 233,140 dental consultations to 25,969 patients during the period under study. Prevention measures, consisting essentially of fluoride rinses, were extended to schoolchildren 6–14 years of age.

Emerging and Re-emerging Diseases

During 1998–1999, Honduras developed the technical capacity to diagnose leptospirosis. The first case was diagnosed in 1998 at a hospital in San Pedro Sula, presaging an outbreak that appeared four days after Hurricane Mitch. In 1999, a total of 39 cases were diagnosed in different parts of the country, the majority in males 15–49 years of age.

In 1998, activities were initiated making it possible to diagnose hantavirus, and in 1999 two surveys suggested the presence of a virus related to the hantavirus family, with a seroprevalence of 11% in 549 samples taken from the general population in communities in the southern part of the country (department of Choluteca).

RESPONSE OF THE HEALTH SYSTEM

National Health Policies and Plans

The reform process in Honduras has gone through various stages: modernization of the State (1990), the national initiative emphasizing access to health services (1996), the new agenda for health (1998), and transformation of the health sector (2000). From 1996–1998, the Ministry of Public Health made access to health services the focal point of sectoral reform and modernization. In 1998, when the country suffered the worst natural disaster in its history as a result of Hurricane Mitch, the federal government established policy guidelines for 1999–2001 that took into account the need to actively promote health sector reform within the framework of the national reconstruction process. These policy guidelines call for immediate action to rebuild the health system to meet the basic needs of the Honduran people and the introduction of a series of progressive changes (organizational, administrative, and operational) that will ensure access to health services with a higher level of equity, efficiency, and quality. The fundamental objective of the reconstruction policy is to reestablish and strengthen the services network through a shared strategy for transformation of the sector that will optimize the utilization of resources, expand coverage, and improve coordination of the institutions involved.

In the year 2000, the Ministry of Public Health stressed decentralization as the central element of sectoral reform, with the goal of improving services in terms of access and quality, comprehensive care for priority problems, training of human resources, financing, introduction of a new health care model, strengthening of the Ministry's leadership role in the sector, and timely provision and control of supplies through an integrated information system. Also that year a plan for institutional strengthening was mapped out with a view to guiding, enabling, and promoting the decentralization of health services.

Health Sector Reform

The health sector reform strategy is based on the principles of universality, solidarity, equity, efficiency, participation, quality, and transparency, as established in the policy guidelines for 1991–2001. Fulfillment of its objectives will depend on implementation of four basic lines of action: institutional development of the Ministry of Public Health, decentralization and local development, health promotion, and reorganization of the health care model based on strengthened management.

One of the pillars of sectoral reform is strengthening the leadership role of the Ministry of Public Health to enable it to effectively perform its functions of sectoral management, health regulation, guaranteeing insurance coverage for the population, orderly management of financing, delivery of services, and performance of essential public health functions. To improve institutional management at its different levels and promote solutions at the level at which a problem has arisen, as well as to monitor the implementation of plans and projects, links were established between the Ministry's Coordinating Council and the Technical Council for Institutional Management. To improve and strengthen the information system, a Management and Financial Information System was introduced in 1999 and a Management Information System was implemented in 2001, both of which are designed to serve as management support tools for the information system as a whole. To support the coordination and management of external cooperation, a Master Plan for Investments in Health was drawn up.

To advance decentralization and local development, viewed as the central elements of the reform, emphasis was placed on getting municipalities to pool their efforts and developing management commitments and agreements, thus enhancing the democratic process, fostering social partnerships, creating greater equity between municipalities, and cultivating a concerned citizenry.

Because it furthers decentralization and the democratic participation of the population, the health promotion strategy has become the basic instrument of sectoral transformation.

With regard to reorganization of the health care model and the strengthening of management, efforts to improve the leadership role of the Ministry of Public Health included a series of seminars held in 2001 for management executives in the various health regions. In an exercise aimed at remedying the imbalance between the available supply of hospital services and the demand, as well as ensuring the effectiveness of the services network, teams were assigned to the 12 regional and area hospitals and asked to prepare data entry profiles to characterize the situation in each hospital and identify its most pressing needs. In an-

other exercise that same year, a large number of participants representing different areas of the country took part in assessing the performance of essential functions in the public health system as a first step toward self-evaluation.

The Health System

Institutional Organization

The health sector consists of two subsectors: the public and the private. The first consists of the Ministry of Public Health, the Honduran Social Security Institute (IHSS), the National Water Supply and Sewerage Service, and the National Institute for the Prevention of Alcoholism, Drug Addiction, and Drug Dependency. The Ministry of Public Health is responsible for playing a leadership and regulatory role in the sector, drafting policies, and in general, guaranteeing the people's constitutional right to health. There are 1,477 registered Health Service Production Units, of which 1,167 come under the Ministry of Public Health and 61 are hospitals, which together have a total of 4,093 beds, or 1.1 beds per 10,000 inhabitants.

The Ministry of Public Health services cover 60% of the population, while the social security system, including the IHSS, and the services provided by the armed forces and the National University of Honduras (UNAH) take care of between 10% and 12% of the population; private services meet the needs of another 10%; and the remainder of the population is without access to health services. The Ministry of Public Health is organized into 9 regions and 42 areas that administer health services and carry out health promotion, curative, and health protection activities in specific geographic areas (this organizational structure does not coincide with the political-administrative divisions of the country). The services provided by the Ministry of Public Health are organized into seven operational levels. According to the latest data available, its 1,167 Health Service Production Units consist of 6 national, 6 regional, and 16 area hospitals, 23 maternal and child health clinics, 3 peripheral clinics, 289 health centers with a physician and dentist on duty, and 824 rural health centers.

Hurricane Mitch affected 123 Health Service Production Units; 115 of them suffered varying degrees of damage and 8 were totally destroyed, but authorities managed to restore services within a relatively short period of time. In 2000, the Ministry of Public Health hospitals recorded 228,623 discharges, 40% of which involved child delivery care. Of all the discharges, 38% were from national hospitals, 29% from regional hospitals, and the remainder from area hospitals and maternal and child health clinics.

The IHSS has only two operational levels: hospital care in one of two hospitals—the Specialized Medicine Hospital in Tegucigalpa (242 beds) and the Regional Hospital in San Pedro Sula (240 beds)—and outpatient care in five peripheral clinics. The 482 beds offered by the IHSS compare with the 652 it had available in late 1998, when the Medical-Surgical Hospital in Tegucigalpa was closed down and merged with the Maternal and Child Care Hospital to form the current Specialized Medicine Hospital. In 2000, the IHSS provided 1,267,646 medical consultations and recorded a total of 52,413 hospital discharges.

Developments in Health Legislation

In 2000, renewed impetus was given to health regulation processes under the leadership of the Ministry of Public Health and the underlying legislation was updated. The Health Code was revised and regulations were drawn up for the licensing of public and private health establishments based on the definition of criteria governing relationships between nongovernmental organizations (NGOs) that operate in the health field.

Although legislation on drugs had been enacted in 1992, the enabling regulations were revised in 2000 to include specific new provisions relating to the Public Health Registry of Vaccines and Herbal Remedies. Formulation of the National Drug Policy and progress made on the Integrated Rehabilitation Policy (2002) strengthened the Ministry of Health's leadership role in this area.

Within the framework of the Customs Union, the Ministry of Public Health adopted a number of technical standards, including a manual on Good Manufacturing Practices, a manual on self-inspection by the pharmaceutical industry, and drug risk criteria. The CA-4 countries (El Salvador, Guatemala, Honduras, and Nicaragua) launched programs to harmonize their regulatory requirements in 2001 and 2002.

Private Participation in the Health System

The private sector consists of 303 registered clinics and hospitals—a figure subject to confirmation based on the results of the census to be completed in 2002. Of the 31 private hospitals, only 16 report statistics to the Ministry of Public Health: with 575 beds, they recorded 11,678 discharges in 2000.

Health Insurance

Public insurance, which operates through the IHSS, provides coverage for 37.1% of the economically active population. It offers a regime of benefits that covers both the insured individuals and their beneficiaries (wives and children under 5 years old). Private insurance, acquired through voluntary affiliation, is provided on the basis of plans agreed upon either individually or collectively. The percentage of population covered under policies issued by private insurers is unknown.

Organization of Regulatory Actions

The Ministry of Public Health's Department of Pharmacy is responsible for the regulation of medicinal drugs and has concentrated its efforts on the Public Health Registry, where it has listed 8,725 drugs, 83.4% of them proprietary and the remainder generic. Sanitary inspection and monitoring is oriented toward

controlling the distribution network but not the pharmaceutical industry itself, which is not subject to regular inspection and for the most part does not adhere to Good Manufacturing Practices. With regard to vaccines, only those acquired through the private sector are registered, not those from the Expanded Program on Immunization (EPI). Herbal remedies are not listed. Quality control of drugs is carried out by the Official Laboratory, which performs between 1,500 and 2,000 analyses per year. In 2000, a random sampling of 88 drugs was analyzed. There is no program in place for guaranteeing the quality of drugs; there is no regulation of laboratory reagents or medical devices and equipment; and there are no basic lists of such supplies or regulations governing their procurement.

Environmental Quality

The country's water-producing micro basins have been affected by rapid deforestation (estimated at 800 km^2 a year) in recent years, which has had harmful effects on both the quality and the quantity of water produced. Progress in the provision of potable water and sanitation services in general has been limited over the past five years. Investment in the sector during the last two years has been channeled mainly toward the rehabilitation of infrastructure damaged by Hurricane Mitch, and the funds have been provided in large part by donor countries.

In 1999, national water supply coverage in Honduras was 80.9%, 72.2% provided through household connections and 5.7% by aqueducts or connections near the home. Of the population without household connections, 2.6% got their water from hand-driven wells; 2.6% from pump wells; 2.2% from purchased sources; and 11.7% from public spigots or fountains. A total of 3,310 urban and rural aqueducts were operated and maintained by the National Autonomous Service, the municipal governments, and 2,528 water boards. There were 1,382 authorized water boards and 2,226 hydraulic systems. Of the 3,310 aqueducts, only 2,226 provided water all year round. In all, 98.1% of the systems worked only intermittently and just 31.2% of them were disinfected; of the latter, 51% were in urban areas. A total of 1,884 hypochlorinators had been installed in rural aqueducts, but only 638 were working.

According to 1999 data, 71.1% of the population had access to some form of excreta disposal; 26.6% had connections to sanitary sewers, 16.8% had septic tanks or pits, and 27.7% had latrines. In all, 67 municipalities disposed of some of their wastewater in sanitary sewerage systems, but there were only 51 installations for the treatment of household wastewater and sewage, one with a percolating filter, 3 with septic tanks, 23 with oxidation ponds, 20 with Imhoff tanks, 2 with aerated ponds, and 2 with biofilters. The total annual volume of wastewater collected by sewer systems connected to a treatment system was 111,840,000 m^3, corresponding to 30,182 tons of organic load a year.

Of the 298 municipalities, 47 provided refuse collection services, principally in urban areas, which covered only 47% of the population residing in these jurisdictions. Annual refuse production was estimated at 842,358 tons, of which 257,574 tons were collected. There were 48 garbage dumps, 4 sanitary landfills, and 1 crematorium.

Since 1995 there has been regular monitoring of air quality in Tegucigalpa and intermittent monitoring in San Pedro Sula and La Ceiba, the results of which indicate that concentration levels of suspended particles have consistently exceeded the standard international limits. Nor have standards for ozone and nitrous oxides been met during certain periods of the year, especially in the dry season, when there are more forest fires and harvested fields and vacant lots are burned.

Organization of Public Health Care Services

Health Promotion

The Ministry of Education coordinates sporting events with a view to encouraging healthy lifestyles. Several new bodies were created, including the National Commission on Abuse Prevention, a government office on women's affairs, and 20 interinstitutional councils at the regional level to respond to and prevent family violence. The Office of the Public Prosecutor now has a division specifically devoted to the prosecution of offenses against minors, one for the prosecution of offenses against women, and a bureau that deals with drug trafficking.

In February 2001 an interinstitutional committee coordinated by the Ministry of Public Health presented civil society with a proposal to address violence in which priority is given to prevention. At about the same time, the San Pedro Sula municipal government presented community leaders with a proposal for the prevention of violence based on interventions at the level of various population groups—preschoolers, schoolchildren, adolescents, and adults—with a component on safety as well.

The National Congress has been working on a new code for the protection of children, as well as laws designed to combat alcoholism and drug addiction, a new penal code, a law creating the Children and Family Institute, and a special law on family violence. The Office of the National Commissioner for the Protection of Human Rights has also been strengthened, with special attention given to minor offenders, battered women, and abused minors. Social communication activities are being increasingly incorporated into municipal health planning.

Disease Prevention and Control Programs

The Ministry of Public Health's Bureau on Population Risks has departments devoted to epidemiology, maternal and child care, chronic diseases, sexually transmitted infections, AIDS, tuberculosis, mental health, emergency care, sanitation, vector-borne diseases, public health, rehabilitation and the disabled, and food and nutrition. All perform essentially normative functions.

At the regional level, prevention and control programs are headed by a regional epidemiologist, and it is at that level that actions aimed

at the principal health problems in the respective geographic areas are planned, executed, and evaluated, with the support and participation of technical groups in the various fields of health. These multidisciplinary teams assume the responsibilities described above at the regional level. In addition, some municipalities within the health areas have formed health surveillance teams.

Health Analysis, Epidemiological Surveillance, and Public Health Laboratory Systems

The Ministry of Public Health promotes the strengthening of multidisciplinary health analysis teams (analysis units) in the different health areas and at the regional and central level. During 1999–2002, this initiative was implemented on a demonstration phase basis in Health Region No. 7 (department of Olancho) with the intention of later extending it to the municipal level.

Up until 2000, epidemiological surveillance was based on a network of 1,190 reporting units, which together constituted the "Action Alert" system, and the percentage of those making weekly reports that year ranged from 70% to 80%. The public health laboratory network was strengthened thanks to technical and financial resources received following Hurricane Mitch.

Organization of Individual Health Care Services

Ambulatory, Emergency, and Inpatient Services

Data supplied by the Ministry of Public Health indicate that in 1996 there were 1,334 health establishments, of which 730 (55%) came under the Ministry, 184 (14%) belonged to the IHSS, 417 (31%) were in the private sector, and 3 (0.2%) were run by the Armed Forces. There were 15,236 hospital beds, of which 7,234 (47%) corresponded to the Ministry, 1,706 (11%) to the IHSS, 5,796 (38%) to the private sector, and 500 (3%) to the Armed Forces. According to these figures, the overall bed-population ratio would be 1:500; however, there are some discrepancies between the different sources regarding the number of beds available.

In 1996, the total number of outpatient consultations in Ministry establishments came to 5.8 million, with 2.2 million emergency room visits (0.3 per inhabitant). Hospital discharges came to a total of 372,000 (50 per 1,000 population). There is no updated information available on the output of the IHSS and other public institutions.

Auxiliary Diagnostic Services and Blood Banks

Honduras has a national blood policy, a National Blood Plan, a National Blood Reference Center (the Honduran Red Cross National Blood Program), 26 blood banks, and 29 blood collection centers. In 2000, a total of 38,328 blood units were collected; 18.3% were voluntary donations, 8.8% paid donations, and 72.8% replacements by family members. All donations are screened for HIV, hepatitis B, hepatitis C, syphilis, and *Trypanosoma cruzi.*

Specialized Services

In 2000, an information system was installed at the principal public and private institutions that provide rehabilitation services, including the Fundación Teletón [Telethon Foundation], the IHSS, and the San Felipe General Hospital. A document outlining national policies on rehabilitation was drawn up and submitted to the National Congress for consideration and approval. Community-based rehabilitation services were created and incorporated into the five centers that offer basic care. Under a tripartite Mexico-Canada-PAHO initiative supported by the Government of Honduras, a successful operation has been providing care since September 1999 for the victims of antipersonnel landmines laid along the country's border with Nicaragua and El Salvador.

Mental health care consists mainly of hospital services. There are two psychiatric hospitals: the Santa Rosita Hospital for Chronic Cases and the Dr. Mario Mendoza Hospital for Acute Cases. At the central level the Mental Health Department in the Ministry of Public Health performs a technical and normative role, working in coordination with mental health teams in the nine health regions. At the local level there are multidisciplinary teams, which for the most part have not received specialized training in mental health; however, there are a few community health programs carried out by postgraduate psychiatric students at health centers in Tegucigalpa. Most psychiatrists work in the two hospitals mentioned above.

The network of maternal and child health services consists of care units for low-risk deliveries at 32 maternal and child health clinics and seven maternity homes located in eight of the country's health regions. In addition to attending low-risk deliveries, the maternal and child health clinics examine the women with a view to detecting any signs of reproductive risk so that they can be referred on a timely basis for more complex care. The maternity homes, on the other hand, are intermediate units that offer shelter to any pregnant woman, with or without signs of obstetric risk, prior to delivery of the child at a third-level hospital, to which each home has access. There are no high-complexity specialized services available for delivery or puerperal care. Among the strategies designed to implement the National Program of Comprehensive Care for Adolescents is a proposal to approach the problems of this population group by creating special spaces set apart for their care.

The IHSS provides services for 14,680 pensioned and retired persons throughout the country. The IHSS Unit for Retired and Pensioned Persons offers a program that includes seminars to aid in preparing for retirement, classes in various handicrafts, and courses offering support for the management of projects.

A National Law on Disaster Preparedness was enacted in 1999 by means of Decree 09-90-E of 1990 and its enabling regulations. The new legislation establishes the Standing Committee on Disaster Preparedness and regional, departmental, and municipal committees responsible for adopting the necessary policies and

measures in the event of disasters. The Ministry of Public Health's National Department of Emergencies coordinates activities at the national level through the Health Commission. At the local level, activities are coordinated by regional and area health teams and the Health Service Production Units. During emergencies, Emergency Operation Centers are set up at the different levels.

The Ministry of Public Health, working with the National Health Services Program and the National Maintenance Center, conducted studies on structural, nonstructural, and functional vulnerability at four of the country's hospitals located in areas exposed to multiple hazards. The steps taken to reduce vulnerability to natural disasters included the application of minimum risk-reduction standards in each service. The disaster preparedness program includes such activities as ongoing training of health-sector and community personnel, with emphasis on the development of community emergency plans. Hospital emergency planning includes mitigation activities.

Health Supplies

Some 15,000 drugs are available on the pharmaceutical market. In 1998, the demand for drugs was estimated at US$ 89,232, while the net overall supply was valued at US$ 134,624. Total spending on medicinal drugs amounted to 1.9% of the GDP in 1997 and 1.7% in 1998. There are currently 42 pharmaceutical laboratories financed by national capital which produce between 15% and 20% of the drugs consumed; the rest are mainly imported from other Central American countries and the United States.

The national distribution network for medicinal drugs consists of 88 wholesalers (drugstore chains), 656 private pharmacies, 242 dispensaries, 200 medical kiosks, and an undetermined number of informal vendors and stores where herbal and other natural remedies are sold. These pharmacies are not evenly distributed throughout the country; they tend to be concentrated in the more developed areas (the Atlantic coast and the central part of the country). Similarly, 60% of the 500 community-managed drug funds are found in the departments of Choluteca, Comayagua, Intibucá, and Lempira.

The State does not have any drug price control programs, and the Ministry of Industry and Commerce only controls the profit margin on imported pharmaceutical products. The Ministry of Public Health has a list of basic drugs that includes 271 active principles and 365 pharmaceutical preparations. The cost of drugs amounted to 13.8% of government spending on health in 1996, 14.6% in 1997, 12% in 1998, and 8.3% in 1999.

Human Resources

Availability by Type of Resource

During 1996–2000, the supply of human resources in the health field saw sustained growth in some areas. For example, while there was a steady rise in the number of professionals graduating in general medicine, the number of professional nurses declined during this same period. According to cumulative enrollment records for the same period reported by UNAH, 3,009 students were registered in medical school, 880 were studying nursing, and 37 were training as radiology technicians. In 2000, there were 5,287 registered physicians, 2,002 (37.8%) of them working in the public subsector, 353 (6.6%) in the IHSS, and 2,932 (55.4%) in the private subsector, for an average ratio of 8.8 per 10,000 population. Also that year there were 1,957 registered nurses, 887 (45.3%) of them working in the public subsector, 140 (7.1%) in the IHSS, and 930 (47.5%) in the private subsector, for an average ratio of 3 per 10,000 population. There were also 581 dentists, only 2% of whom were working in the public subsector, for an average ratio of 2.6 per 10,000 population.

In 2000, only 3.7% of the 1,752 registered pharmacists were working in the public subsector, and the average ratio was 0.3 pharmacists per 10,000 population. Between 1996 and 2000, the UNAH School of Pharmacy graduated an average of 71 pharmacists a year. As of the year 2000, 51 pharmacists were working in the Ministry of Public Health, 22 of them hospital pharmacists covering 15 of the country's 28 hospitals. The IHSS has only six pharmacists. Also that year 78 persons graduated with a master's degree in public health; 82 nurses completed their studies as specialists in maternal and perinatal health, and 22 nurses graduated as specialists in family health. Mid-level and auxiliary nursing technicians included 724 anesthesia technicians (0.4 per 10,000 population), 650 radiology technicians (0.4 per 10,000), 2,358 laboratory technicians (0.6 per 10,000), 400 microbiologists (0.5 per 10,000), and 7,256 nursing auxiliaries (11.8 per 10,000).

The postulates of health reform call for the strategic monitoring of personnel development, but there is no human resources information system in place to back up such a process or support the Ministry of Public Health in the training, production, and utilization of human resources.

Training

UNAH is responsible for the training of health professionals. A program for the preparation of psychologists was initiated at Our Lady of Peace Catholic University in 1999, and psychologists with degrees from foreign universities also work in the country. The Ministry of Public Health has establishments for the training of auxiliary and mid-level technicians.

Health Research and Technology

Organization and Financing of Scientific Activity and Training for Research

The Honduran Science and Technology Council is responsible for coordinating the sector's science and technology subsystems,

and it enlists the public and private academic subsectors and nongovernmental organizations in the formulation and validation of national policy on scientific and technological research. The Council also administers the Program for the Support of Scientific Development and Innovation in Honduran Youth, which is designed to encourage creativity in high school and university students and independent professionals, to be applied to the development of science and technology.

Technological Development

A project financed by the Organization of American States (OAS), the Investment Program for the Scientific and Technological Development of Central America and Panama, was initiated in 1999 for the purpose of designing and formulating investment programs in 14 research areas, including the calibration of hospital equipment, support for laboratories, and strengthening the regulatory role of the Ministry of Public Health. The year 2000 saw the launching of the Ibero-American Program of Science and Technology for Development, which trains human resources in the fields of scientific and technological research to aid in the solution of specific problems and the implementation of programs of social interest.

Scientific and Technical Documentation

In 2000, three scientific journals in the health field were being published regularly: *Revista Médica Hondureña*, *Honduras Pediátrica*, and *Revista de los Posgrados de Medicina*. Only the first of these is cited in the LILACS database. The National Library of Medicine has a trained staff that receives medical journals from a number of countries. The Virtual Health Library, operated by the Library of Medicine, seeks to provide the entire country with access to health information. The Ministry of Public Health, the IHSS, and other organizations have small documentation centers which for the most part lack the necessary infrastructure, specialized human resources, equipment, and budget for the purchase of publications.

Health Sector Expenditure and Financing

In 1999, the sector received financing from the following sources: families, which account for 53.7% of national spending on health; the Government, which contributes 32.9%; the IHSS, 7.8%; nonprofit institutions, 4.3%; and private insurance firms, 1.3%. Between 1993 and 1999, financing for the Ministry of Public Health rose 91.6%, mainly thanks to a 117% increase in external funding (a large proportion in the form of long-term reimbursable loans), while over the same period support from the national treasury was reduced from 67.3% to 61.7%. Donations and nonreimbursable loans represented 12.7% of the total. IHSS financing, which comes from participant contributions, was seriously endangered because the amounts paid in did not cover expenses. The private sector financing—the sum of spending by families, nonprofit organizations, and private insurance companies—amounted to 59.3% of the total expenditure.

Per capita public spending on health increased 15.5%, while public spending on health as a percentage of central government expenditure declined from 10.1% in 1993 to 8.6% in 1998. Similarly, public spending on health in relation to total public spending also decreased, from 7.2% to 6.7%. Up until 1998 per capita public spending on health had been trending downward, but in 1999 it took an upward turn at the expense of external financing. Total per capital expenditure on health dropped 24.1% between 1995 and 1999.

External Technical Cooperation and Financing

Prior to Hurricane Mitch, the proportion between external cooperation and national funding for health fluctuated only slightly, remaining at around 22% for external financing and 78% in national funding. After the hurricane, however, the flow of both technical and financial cooperation increased considerably.

In May 1999, a group of cooperating countries and agencies met in Stockholm and committed financial assistance amounting to a total of US$ 2,763.4 million to all sectors. Of this sum, US$ 2,211.8 had been subscribed as of December 2000, demonstrating the high level of support extended by the international community. This support was seen not only in the funds allocated by the Stockholm Consultative Group but also in those received from other sources of cooperation throughout the national reconstruction and transformation process. Contributions during the emergency and humanitarian aid phases came to US$ 97.3 million (4.4%), while the bulk of US$ 1,897.4 million (85.8%) was provided during the reconstruction and transformation phase. The remaining 9.8% of the contributions went for debt relief and other unspecified types of aid.

The United Nations external cooperation agencies represented on the Health Sector Committee lent support to the country during the emergency, rehabilitation, and reconstruction phases through projects designed to contribute to primary health care, health and nutrition, water and sanitation, institutional strengthening, the health services network, local management of risks, and emergency medical care, amounting altogether to a total of US$ 240,158,187. This data refers to USAID, JICA, IDB, the World Bank, UNFPA, GTZ, UNICEF, and SIDA (from a survey conducted by PAHO in May 2001). Resources allocated and channeled by PAHO amounted to US$ 9,283,985.

In addition, SIDA made a contribution of US$ 1.7 million, 20% of which was assigned to Honduras, to implement the Central American Project for Vulnerability Reduction and Disaster Preparedness in the Countries Affected by Hurricane Mitch.

Of the total resources contributed and subscribed, bilateral external cooperation for all sectors amounted to US$ 1,113.2 million (50.3%), and nonreimbursable funds totaled US$ 945.8 mil-

lion (84.5%). Among the largest contributors were Germany, Japan, Spain, Sweden, and the United States, and the outstanding contributors of reimbursable funds, which came to US$ 167.4 million (15%), included Italy, Kuwait, and Spain.

Multilateral cooperation amounted to US$ 1,099.3 million (49%), and nonreimbursable funds totaled US$ 298.8 million (27.2%). Among the largest contributors were WFP, the Inter-American Bank for Reconstruction and Development/ International Development Association (IBRD/ IDA), UNDP, and FAO. Reimbursable funds came to US$ 800.5 million (72.9%), and the main contributors were the IDB, IBRD/IDA, and the Central American Bank for Economic Integration.

Total nonreimbursable funds amounted to US$ 1,244.6 million, while total reimbursable funds were US$ 967.9 million.

FIGURE 1. Population structure, by age and sex, Honduras, 2000.

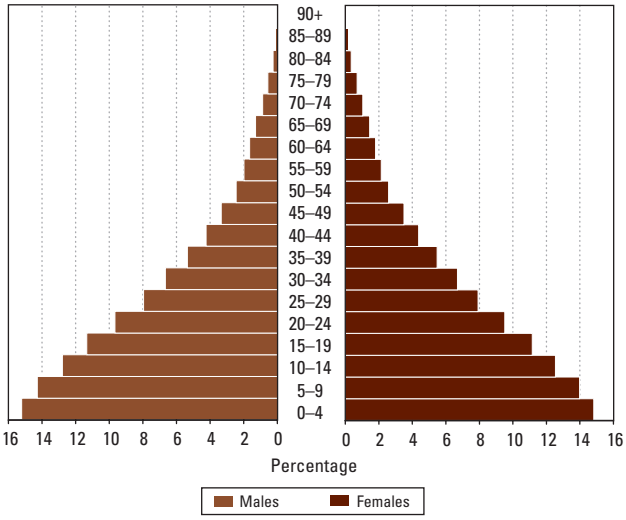

FIGURE 2. Gross domestic product, annual growth (%), Honduras, 1991–2000.

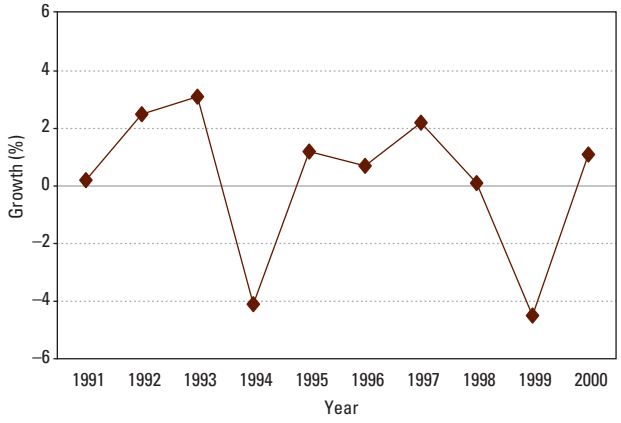

FIGURE 3. Vaccination coverage among the population under 1 year of age, by vaccine, Honduras, 2000.

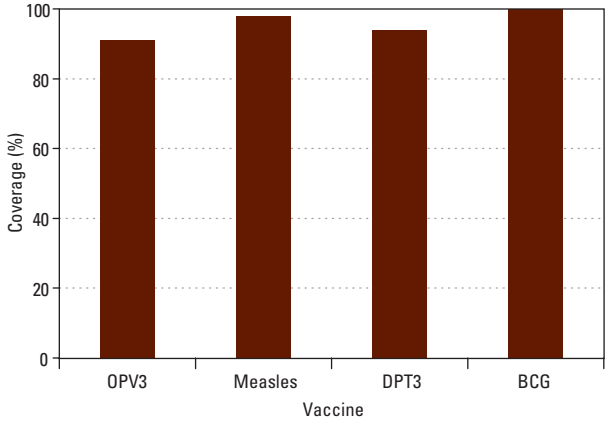

FIGURE 4. AIDS incidence, by sex, with male-female ratio, Honduras, 1994–2000.