

Guatemala is located in Central America and borders Mexico to its north and northwest; Honduras, El Salvador, and Belize to the east; and the Pacific Ocean to the southwest. It has a land area of 108,889 km² and terrain that is largely mountainous, with elevations higher than 4,000 m above sea level. The country enjoys diverse ecosystems and variations in climate. Its location along major geologic fault lines and the presence of volcanoes pose a continuous hazard of earthquakes and volcanic eruptions. The government is a democratic republic, with its capital in Guatemala City. Administrative and political divisions include 22 departments, 331 municipalities, and 20,485 villages.

Guatemala is among the countries classified with a medium level of human development. It is currently experiencing an economic slowdown, which will hinder its ability to achieve the Millennium Development Goals (MDGs) in its health and social sectors. Half of its population is indigenous. There are significant gender, ethnicity, and geographic disparities in working conditions, education, and health status. The incidence of poverty and extreme poverty is much higher among indigenous groups and in rural areas. In Guatemala, there is a correlation between poverty and ethnicity.

MAIN ACHIEVEMENTS

HEALTH DETERMINANTS AND INEQUALITIES

Forty percent of the population is economically active. Half of this population lives in rural areas, where only 37% of residents are fully employed. From 2007 to 2010, unemployment rose, and in 2010 the government set the minimum monthly wage at US\$ 250. Illiteracy, which fell from 24% in 2006 to 18.5% in 2010, continues to be found predominantly in women. School enrollment rates increased steadily at all levels of education, with coverage reaching 98.7% for primary education. Although the average number of years of schooling for the general population is 5.3, for the indigenous population it is only 2.1.

THE ENVIRONMENT AND HUMAN SECURITY

Access to basic sanitation services has improved. Marked differences between urban and rural areas persist, however, and the country is still unable to ensure safe drinking water for most of the population. In urban areas, 95% of households have access to improved water sources, compared to 82% in rural areas. Of the total urban population, 71% live in adequate housing.

HEALTH CONDITIONS AND TRENDS

In 2007, the National Maternal Mortality Study was conducted, providing knowledge about the causes, risk factors, and social impact of maternal mortality, as well as the barriers to accessing care. From 2006 to 2010, infant mortality fell from 39 to 34 per 1,000 live births.

Malaria is endemic in Guatemala, and malaria cases have fallen by 75%. Dengue epidemics (hyperendemic, with circulation of the four serotypes) were recorded during 2009 and 2010. An estimated 1.4 million people in Guatemala are exposed to Chagas' disease, and some 170,000 are infected. Onchocerciasis (river blindness) transmission was interrupted in three foci; only one central focus remains, which is under

Selected basic indicators, Guatemala, 2006–2010.

Indicator	Value
Population 2010 (millions)	14.4
Poverty rate (%) (2006)	51.0
Literacy rate (%) (2010)	81.5
Life expectancy at birth (years) (2010)	70.8
General death rate (per 1,000 population) (2009)	6.1
Infant mortality rate (per 1,000 live births) (2010)	34.0
Maternal mortality rate (per 100,000 live births) (2007)	139.7
Physicians per 1,000 population (2010)	1.1
Hospital beds per 1,000 population (2010)	0.6
DPT3 immunization coverage (%) (2010)	94.0
Births attended by trained personnel (%) (2009)	51.2

surveillance. Notifications of leishmaniasis have fallen, but the disease is probably underreported. From 2006 to 2008, five deaths from human rabies transmitted by dogs were reported.

Mortality from tuberculosis declined over the period. The treatment success rate in new smear-positive cases was 83%, and the drop-out rate was 9%. The country has been free from the circulation of wild poliovirus and has made progress toward eliminating measles, rubella, and congenital rubella syndrome. Neonatal tetanus remains eliminated. Diphtheria, tubercular meningitis, whooping cough, hepatitis B, and invasive *Haemophilus influenzae* type b infections are being monitored and controlled. Immunization coverage rates of over 90% have been achieved in children under age 2. In 2010, the rotavirus vaccine was added to the vaccination series, and more than 1.2 million doses of the pandemic influenza A(H1N1) vaccine were administered.

Implementation of the International Health Regulations has been a priority. Contributions for research amounted to US\$ 9.5 million in 2008–2009.

HEALTH POLICIES, THE HEALTH SYSTEM, AND SOCIAL PROTECTION

The Health Code stipulates that the Ministry of Public Health and Social Welfare is formally responsible for governance of the health sector, but legal instruments to facilitate the exercise of this role are limited. There are various forms of insurance, including public and private insurance schemes and social security. Private insurance and social security cover less than 25% of the population. Ministry of Health service delivery takes place at three levels of care. The first level comprises health posts, primary health care centers, and the Extension of Coverage Program, which includes outpatient care focusing on prenatal care, immunization, nutritional supplementation, and growth monitoring in children. At the second level of care, services are provided in health centers and integrated maternal and child

The Maternal Mortality Challenge

In 2007, the National Maternal Mortality Study was conducted and 537 maternal deaths were identified, expressed as a maternal mortality ratio of 139.7 per 100,000 live births. Among the social impacts of these deaths were 1,716 orphaned children. The study also found maternal mortality to be underreported by an estimated 40.7%. The women who died were largely indigenous (70%), with limited education (46% illiterate), multiparous (56%), and had died at home (46%). An estimated 41% of the maternal deaths were found to be related to the health service being unable to prevent, identify, or handle the emergency appropriately. Barriers to accessing health services were identified—e.g., lack of transportation or the money to pay for it (47%) and the failure by the women or their families to make the decision to seek care (33%).

In this context, it is unlikely that Guatemala will achieve the maternal mortality ratio of 55 per 100,000 live births by 2015 set by the Millennium Development Goals.

In response to this situation, in 2009 the national government implemented a conditional cash transfer program called “Mi Familia Progresá” (“My Family is Making Progress”), as well as a policy that made access to public education and health services free. These programs produced positive results in prenatal care coverage, particularly in rural areas. However, the impact that financial support for pregnant women has had on maternal mortality or the fertility rate has not been evaluated.

health centers. The third level is made up of hospitals. In 2006, the network of services comprised 43 hospitals, 279 health centers, 903 health posts, 46 health posts staffed with a physician, and 4,163 “convergence centers” (clinics held periodically and served by visiting medical staff).

The Ministry of Health’s 2010 budget was US\$ 462.5 million (US\$ 40.20 per capita). Payments to nongovernmental organizations (NGOs) that are providers in the Extension of Coverage Program represented 18.9% of this sum. Of the

remainder, 55% went to hospitals and 45% to first- and second-level health care facilities.

In 2010, the Ministry joined with the National Association of Municipalities in promoting the Strategy for Healthy Municipalities.

Guatemala’s public university and four private universities provide medical training. Cuba’s Latin American School of Medicine also trains students from Guatemala. In 2010, there were 16,043 licensed physicians, 9,447 of whom were working in the profession. Although 71% were men, the number of female physicians has been steadily growing. The country has an estimated 11 physicians per 10,000 population, but they are not evenly distributed geographically. With 36.1 physicians per 10,000 population, the Department of Guatemala has 71% of the physicians, while the Department of Quiché, for example, has barely 1.4 physicians per 10,000 population. The Cuban Medical Brigade provides 235 physicians who work in the country.

KNOWLEDGE, TECHNOLOGY, AND INFORMATION

The country has continued to implement various projects and activities under the National Science, Technology, and Innovation Plan for 2005–2014, coordinated by the National Science and Technology Committee. This includes projects and activities in which public, private, and academic institutions participate. The Plan also includes research activities.

MAIN CHALLENGES AND PROSPECTS

Disparities in working conditions that are based on gender, geography, and ethnicity are a major challenge. Indigenous populations (Mayan, Garifuna, and Xincas) constitute 58% of the poor and 72% of the extremely poor. More than 75% of the indigenous population lives in poverty.

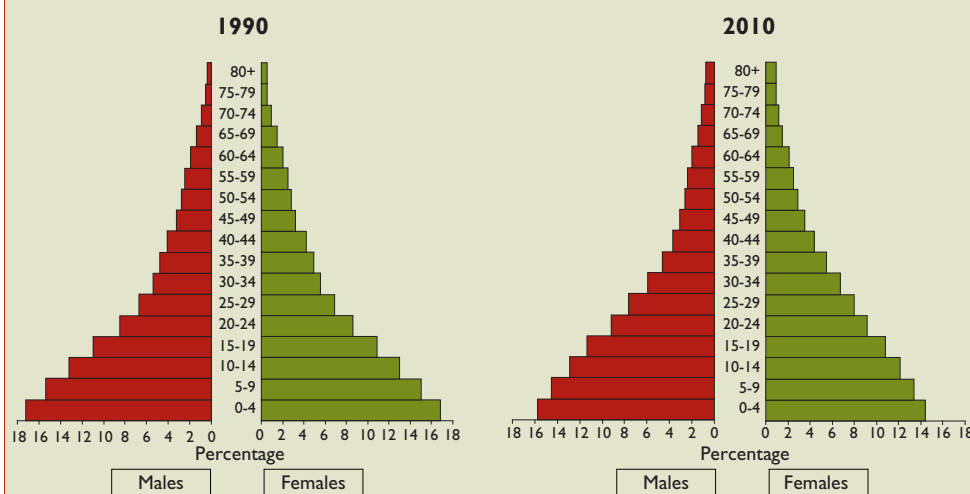
Forty-five percent of women and girls have been reported

to have experienced some type of violence, a figure that is even higher in urban areas. In 2009, an estimated 2.5 million Guatemalans were at risk of food scarcity and nutritional insecurity. In 2008, only 58% of adolescents had finished primary school, placing Guatemala among the least developed countries in Latin America.

Although 52% of Guatemala’s forests are in protected areas, 26,300 hectares are nonetheless reportedly lost from these areas each year, especially in the Maya Biosphere Reserve. In 2010, damages and losses in Guatemala from Tropical Storm Agatha exceeded US\$ 1.5 billion.

In 2008 the water quality surveillance system reported that more than 50%

Population structure, by age and sex, Guatemala, 1990 and 2010.



of samples did not have adequate chlorine levels and 25% exhibited bacteriological contamination. In 2006, adequate wastewater disposal reached 23% coverage in rural areas (82% in urban areas). Not all waste that reaches the sewer network is treated.

Eighty-five percent of solid waste is disposed of improperly or without treatment. Only 35% of households have refuse collection services, and 84% of garbage dumps are unauthorized. In rural and peri-urban areas, more than half the population lives in unhealthy and overcrowded conditions. Housing is ramshackle, with dirt floors and few barriers to disease vectors.

Air quality in Guatemala City is deteriorating due to increased ambient concentrations of suspended particles, nitrogen dioxide, and sulfur dioxide. Compared with 2009, average annual PM_{10} (levels of breathable particulates smaller than 10 μm) increased by 26% and nitrogen dioxide, by 19%.

The total fertility rate in 2009 continues to be high (3.6 children per woman). Maternal mortality also remains high (140 deaths per 100,000 live births, which may be even higher since underreporting is estimated at 40%). Maternal mortality is affected by limited hospital delivery coverage, and only half of deliveries take place in health facilities. This underscores the need to strengthen safe motherhood strategies.

The leading causes of death in children under age 5 are highly preventable, especially pneumonia (34.4%) and diarrhea (18.4%).

Among school-age children, 45.6% suffered from chronic malnutrition in 2008. Guatemala has the highest rate of chronic malnutrition in Latin America and the fourth highest in the world. Malnutrition in Guatemala has fallen by only 5.1% in the past 20 years.

Twelve percent of adults aged 18–25 have alcohol dependency or abuse problems. An estimated 27.8% of adolescents begin drinking at age 13 or earlier. Sixteen percent of adults are smokers. The country enacted a law requiring smoke-free environments in 2008.

From 1984 to 2009, one-third of all AIDS cases in Guatemala were among adults aged 20–29, which suggests they may have become HIV-positive as adolescents. In 2009, an estimated 68,000 people were living with HIV, and there were 7,500 new infections each year. The HIV/AIDS epidemic has spread, is concentrated in urban areas, and is affecting women in ever-greater numbers.

Among adolescents the leading cause of death is from gunshot wounds. The homicide rate is 41.5 per 100,000. Much of the problem stems from gangs, organized crime, and drug trafficking. Violent assaults against women have increased. In 86.5% of the reported cases of domestic violence in 2010, men were the perpetrators.

There are no public policies or legislation to protect the mentally ill. With regard to traffic accidents, there is no

specific regulation relating to child safety seats. In addition, the legislation governing speed limits, blood alcohol level, and helmet use is not very effective.

Health expenditures as a percentage of gross domestic product (GDP) held steady at 1.2% from 2006 to 2010, and accounted for 18.6% of social spending in 2008. The burden of health care financing that falls on households (over 60%) and what families pay out-of-pocket for health services are higher among poorer families. A 2006 survey on family remittances revealed that 10% of household expenditures were for health services. Of these expenses, 98% were for medicines, diagnostic tests, physician's fees, and hospitalization, and only 2% were for insurance. Total household outlays exceeded total health expenditures by the Ministry of Health.

The country has achieved positive results in terms of institution building, child health, and prevention of communicable diseases. However, the health system continues to have a weak performance, especially at the second and third levels of care. Six out of 10 non-poor people seek health services while only 3 of 10 poor people do.

The Department for Regulation and Control of Pharmaceutical and Related Products of the Ministry of Health and the National Health Laboratory constitute the national regulatory authority. However, there are no legal mechanisms to guarantee the regulation work.

The Ministry has had difficulties in covering health posts in rural areas, particularly in the departments of Quiché and Sololá. Furthermore, given the difficulties in finding physicians to provide outpatient care services in the Extension of Coverage Program, the Ministry began hiring nurses to do this work. In some jurisdictions, basic health teams include a health and nutrition educator and a provider of basic maternal and neonatal care. These personnel are responsible for the health care of 4.5 million inhabitants.

Technological developments and innovation in health mean that the country needs to adhere to best practices in the use of technology, information dissemination, and knowledge generation with the support of technical cooperation.

Guatemala continues to face challenges related to environmental and social determinants, economic development, food insecurity, and social violence. In order to improve health, the country must not only maintain the gains it has made thus far, but also reduce inequities, increase access to services among the most vulnerable groups, prevent and control chronic, noncommunicable diseases, and promote health.

In the future the country must fight to achieve the Millennium Development Goals, integrate the health system, and strengthen the leadership role of the Ministry. Likewise, the challenge of working across sectors must be taken on while considering strategies that take an intercultural and gender approach.