

# Bolivia



Bolivia is located slightly west of South America's center and shares borders with Brazil, Chile, Paraguay, and Peru. The country extends over 1,098,581 km<sup>2</sup>: plains cover 65% of the territory; inter-Andean valleys, 19%; and the highland plateau (Altiplano), where 45% of the population lives, 16%. Bolivia is rich in biodiversity. The main Constitutional Capital is Sucre while La Paz is the seat of government. The country is divided into 9 departments and 337 municipalities and indigenous territories, including 36 nations that speak their own languages.

In Bolivia, which is a lower-middle-income country, a significant proportion of the population falls below the poverty line. In 2010, life expectancy at birth was 66.3 years.

Noncommunicable diseases and a variety of communicable diseases coexist in a complex scenario resulting from exposure to both natural disasters and social inequities, which makes for major differences in health between population groups.

In 2008, health sector expenditure represented 4.6% of the gross domestic product (GDP), of which 3.09% corresponded to public spending (1.78% from the public budget and 1.31% from social security) and 1.53% to private expenditure.

## MAIN ACHIEVEMENTS

### HEALTH DETERMINANTS AND INEQUALITIES

Between 2007 and 2009, extreme poverty declined from 37.7% in 2007 to 26.1% in 2009, which means that the country is likely close to achieving the target for Millennium Development Goal (MDG) 1. This progress is accounted for in part by monetary transfers (e.g., the Juancito Pinto benefit and the Juana Azurduy de Padilla benefit).

Open urban unemployment fell from 7% in 2009 to 5.7% in 2010. The Gini coefficient of income distribution declined from 0.59 in 2006 to 0.51 in 2009, which indicates that there is less inequality in general. However, urban/rural inequalities persist, reflecting the greater vulnerability of the indigenous population.

In 2008, infant mortality was 36 per 1,000 live births in urban areas and 67 per 1,000 in rural areas. Mortality in children under 5 fell from 75 per 1,000 live births in 2003 to 63 per 1,000 in 2008, but again, there continue to be inequalities between urban areas (43 per 1,000 live births) and rural areas (87 per 1,000 live births).

### THE ENVIRONMENT AND HUMAN SECURITY

In 2007 the proportion of population with access to improved drinking water was 74.5% (87.5% in urban areas and 50.3% in the countryside). Access to sanitation was 48% (54% in the urban population and 37% in the rural population). It is hoped that the country's overall coverage

#### Selected basic indicators, Bolivia, 2008–2010.

Indicator	Value
Population 2010 (millions)	10.4
Extreme poverty (%) (2009)	26.1
Literacy rate (%) (2008)	90.7
Life expectancy at birth (years) (2010)	66.3
General mortality (rate per 1,000 population) (2010)	7.29
Infant mortality rate (per 1,000 live births) (2008)	50.0
Maternal mortality rate (per 100,000 live births) (2008)	310
Physicians per 1,000 population (2009)	0.5
Hospital beds per 1,000 population (2009)	1.1
DPT3 immunization coverage (%) (2009)	80.0
Births attended by trained personnel (%) (2008)	71.0

will be 90% for drinking water and 80% for sanitation by 2015.

There was progress with regard to pesticide use and abuse, thanks to implementation of an epidemiological surveillance system.

### HEALTH CONDITIONS AND TRENDS

No confirmed cases of measles were reported between 2001 and 2010. The last mop-up campaign with measles/rubella vaccine was conducted in 2007, reaching 95% coverage. The last case of rubella was reported in 2006.

Tuberculosis has declined, although it continues to be a public health problem. The incidence of all forms of the disease was 76.1 per 100,000 population, while for pulmonary tuberculosis the rate was 59.9 per 100,000. The incidence of pulmonary cases with positive sputum-smear microscopy dropped from 80.1 per 100,000 population in 2001 to 53.8 per 100,000 in 2010.

The law on Chagas' disease, enacted in 2006, resulted in the implementation of vector control in 168 municipalities where the problem had been endemic. *Triatoma infestans* infestations were down to only 3.2% in 2007. In 2011, an international commission in charge of evaluating the status of Chagas' disease declared that vector-borne transmission of *Triatoma cruzi* and *T. infestans* had been interrupted in the department of La Paz. Cases of malaria were reduced by 56% between 2000 and 2010, which means that the target to at least halve the burden of this disease by 2010 has been met.

### Unified Intercultural Community and Family Health System (SAFCI)

The Unified Intercultural Community and Family Health System (SAFCI) currently serves as the backbone for health sector policies. Its goals are to eliminate social exclusion from health services; increase social participation; bring together services and individuals, families, and communities; and reassess traditional medicine. Together, these measures will help improve the living conditions for the population.

SAFCI incorporates traditional medicine and has identified five policy themes: (1) a unified intercultural community health system, (2) leadership, (3) social mobilization, (4) health promotion, and (5) solidarity.

At the end of 2009, the Health Sector Development Plan 2010–2020 “Toward Universal Health” established three strategic lines of action: (1) universal access to SAFCI, (2) health promotion within the SAFCI framework, and (3) governance and leadership within the framework of SAFCI.

### HEALTH POLICIES, THE HEALTH SYSTEM, AND SOCIAL PROTECTION

The health system has six subsectors that provide protection to different populations: the public subsector, the armed forces, social security, nongovernmental organizations, churches, and private agencies. In 2008, social security covered 30.58% of the population, while 11.8% were covered by public subsector insurance.

Universal Maternal and Child Insurance (SUMI) was established in 2003, with the aim of reducing morbidity and mortality in mothers (from pregnancy through 6 months postpartum) and children (up to 5 years

of age). In 2005, SUMI expanded its coverage to include women from childbearing age up to 60 years. Health Insurance for Senior Citizens (SSPAM) was created in 2006. SUMI and SSPAM are financed with municipal funds, the former with 10% of the funds from Popular Participation (municipal tax coparticipation) and the latter from general municipal resources, including the tax on hydrocarbons (IDH), and together they allocate an annual premium of US\$ 56 per beneficiary.

The Unified Intercultural Community and Family Health System (SAFCI) is the central core for health sector policies. The goals of SAFCI are to eliminate social exclusion from public health services, increase social participation, integrate the services, and reassess traditional medicine.

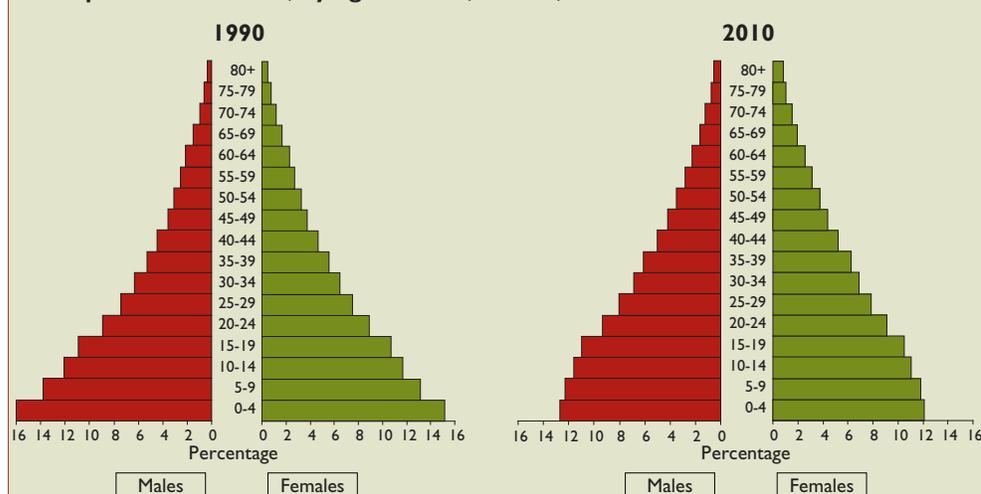
SAFCI also seeks to guarantee access to medicines that do not have patent restrictions. Priority will be given to generics, based on the National List of Essential Drugs, through a procurement mechanism.

### KNOWLEDGE, TECHNOLOGY, AND INFORMATION

Creation of the Vice-Ministry of Science and Technology was an important milestone. Its activities are outlined in the National Science and Technology Plan, which in turn is part of the National Development Plan. In addition, the Ministry of Health and Sports has embarked on a process to set up the Multinational Health Research System (SIPLIS).

The Information, Knowledge, and Communication Management project was created in order to bridge the gap between knowledge generation and access to information. Bolivia has joined the SciELO Network in order to gain better access to health literature. Admission to SciELO was made possible thanks to a joint effort by several Bolivian and international academic and health institutions, including the Vice-Ministry of Science and Technology, San Andrés University, the Bolivia Strategic Research Program, the Bolivian Catholic University, the Bolivian Association of Publishers of Biomedical Journals, PAHO/WHO, and the Latin American and Caribbean Center on Health Sciences Information (BIREME/PAHO/WHO).

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



Bolivia's node in the SciELO Network is coordinated by the Vice-Ministry of Science and Technology, and its operations center is located at San Andrés University, in La Paz.

## MAIN CHALLENGES AND PROSPECTS

As of 2008, Bolivia still had one of the highest infant mortality rates in Latin America (50 per 1,000 live births). The neonatal mortality component represented more than 50% of infant mortality. The estimated maternal mortality ratio for the 2003–2008 period was 310 per 100,000 live births.

The prevalence of low height-for-age was 50.9% in children of mothers with limited schooling, while in children of mothers with more advanced schooling it was only 9.2%. Similarly, the prevalence of chronic malnutrition in children under 5 was 46% in the lowest income quintile, compared with 6.5% in the richest quintile.

The overall proportion of adolescent women who had had a pregnancy was 17.9%, with differences between educational levels (4.3% in women with advanced studies versus 32% in those with only primary schooling), between rural areas (25%) and urban areas (14%), and between the lowest and highest income quintiles (31% and 7.8%, respectively).

The allocation of resources from the tax on hydrocarbons has generated inequalities among departments and among levels of government. For example, per capita income from this tax was 23 times greater in the department of Pando than in the department of La Paz.

Between 2006 and 2011 there were natural disasters of several kinds. Floods and social conflicts accounted for the largest number of deaths (135) and affected 238,530 families.

Less than 30% of the wastewater is treated, and treatment is only done in major urban centers. The greatest source of contamination is mining operations. It may be possible to meet the MDG 7 target for access to drinking water, but not the target for sanitation.

Occupational health has been a neglected field, although the issue is critical in the mining, transportation, construction, and agriculture sectors. Occupational diseases tend to be incorrectly diagnosed, and neither work-related injuries nor occupational diseases are reported.

Maternal and child health is still a major challenge in Bolivia. In 2008, infant mortality and mortality in

children under 5 continued to be high in urban areas and even higher in rural areas.

Cases of HIV/AIDS have risen steadily up through 2010.

In 2009, the largest epidemic of dengue since the 1980s occurred, affecting 130 municipalities, with 84,000 suspected cases and 7,421 confirmed cases (including 25 deaths). Two-thirds of the cases and 69% of the deaths occurred in the department of Santa Cruz.

Almost half (49.2%) the population over 20 years of age has hypertension. The prevalence of fasting hyperglycemia was 7.3%. Mortality from neoplasms was 57.4 per 100,000 population for men and 89.7 per 100,000 for women. During the first six months of 2011, the National Health Information System (SNIS) recorded a total of 1,956 cases of cervical cancer and 6,125 cases of other types of cancer (2,302 in men and 3,823 in women).

The rate of injuries caused by traffic events was 117 per 100,000 population in 2005, and this figure was somewhat higher, 126 per 100,000, in 2009. In the context of a mixed epidemiological profile, violence is a serious public health problem. Between 2006 and 2010, mortality from this cause rose from 5.4 to 8.7 per 100,000 population. The most common forms of violence were child abuse and domestic violence. In 2008, almost half of all women who were married or in an established union were victims of domestic violence, and only 9% sought institutional assistance. The rate of violent sexual crimes in adolescents was 14.7 per 100,000.

Surveillance and control were strengthened within the framework of the Good Governance of Medicines program, but this is an area in which the sector still faces major challenges going forward.

The country has a national agenda of priorities in health research, and emphasis has been placed on the Technology and Research Management project. The challenges that need to be faced include training human resources in health research, promoting the production of health research, disseminating research results within the health system, and strengthening the entities engaged in analyzing research results.

In Bolivia, health sector development is occurring in a context of social inequality that is both determining and limiting the outcomes. It is hoped that progress in health will be closely allied with systematic efforts promoted by the sector and with advances in the country's overall socioeconomic development.