

## Ghana Country Profile

The Republic of Ghana is located on the west coast of Africa and is surrounded by Cote D'Ivoire on the west, Burkina Faso to the north, Togo on the east and the Gulf of Guinea to the south. Ghana's climate is tropical with the eastern and northern areas described as warm and dry, and the southwestern area described as hot and humid. Eastern Ghana is home to Lake Volta, the world's largest artificial reservoir at 8,502 square kilometers (3,275 square miles) of area.

Though more than 200 languages are spoken in Ghana, English remains the official language and all teaching is done in English. The use of English in the medical services industry is prominent.



General Facts	
Capital	Accra
Total Population (2008 estimate)	23,008,000
Accra Population	10,171,980
Total Area	238533 square kilometers (92 098 sq mi)
Accra Area	238.5 square kilometers (92 sq mi)
Gross national income per capita	1,240 USD
Life expectancy at birth m/f	56/58 years
Infant Mortality Rate	52.31 deaths/1,000 live births
Total expenditure on health per capita (2006)	100 USD
Total expenditure of GDP on health (2006)	6.2 %

### History:

The Republic of Ghana became the first Sub-Saharan African nation to gain independence from the United Kingdom in 1957. Prior to the period of Western colonization, Ghana was home to the Ashanti Empire described as one of the most advanced empires in West Africa in the 18<sup>th</sup> and 19<sup>th</sup> centuries. Trade with the West began in the 15<sup>th</sup> century when Portuguese merchants travelled to the region to gain access to the famed gold mines. Since that time, British, French, Dutch, Danish and Swedish merchants and ruling authorities maintained a constant presence in the region. Nicknamed the "Gold Coast" by the British and Cote d'Ivoire by the French, the region was eventually conquered by the British in 1874, and remained under British control until independence in 1957.

Although West Africa has been plagued with internal conflict and ethnic violence, Ghana has remained relatively stable throughout these crises. Despite a history of military coups which began in 1966 with the removal from office of Kwame Nkrumah, Ghana held successful presidential elections in 2009 which marked the second consecutive peaceful transfer of presidential power in Ghanaian history.

**Economy:**

More recent stability has promoted economic growth which is predominately fueled by Ghana’s abundance of natural resources such as gold and cocoa. Agriculture accounts for nearly 35% of Ghana’s GDP. Despite a few strong economic sectors, Ghana is heavily dependent on foreign aid and international financial assistance. Ghana is part of the Heavily Indebted Poor Country program and is benefitting from the Multilateral Debt Relief Initiative. Much of the other aid Ghana receives is directed towards improvements in the healthcare sector.

**National Health Profile:**

Ghana has experienced a steady decline (roughly 3% annually) in infant mortality from 120.84 per 1,000 live births in 1965 to 52.31 per 1,000 live births in 2008. Further, life expectancy has increased from 44 years in 1970 to 57.2 years in 2008. These numbers are a reflection of general healthcare improvements and access. Examples include the government’s Expanded Program of Immunization, which was a 10-year general immunization program initiated in 1989. The government has taken further action and requires children to be immunized before admission in public schools.

Main Causes of Morbidity
HIV/AIDS
Malaria
Lower respiratory infections
Perinatal conditions
Cerebrovascular disease
Ischaemic heart disease
Diarrhoeal diseases
Tuberculosis
Road Traffic Accidents
Chronic obstructive pulmonary disease

Like many countries in Africa, Ghana generally has the full range of infectious diseases endemic to the Sub-Saharan region. The US Government indicates that the Ghanaian population is at very serious risk for major infectious diseases, most notably: hepatitis A, malaria, tuberculosis and HIV. Despite recent efforts to stabilize healthcare in Ghana, total expenditure on health care is only slightly above 6% of its GDP. Additional aid is needed in the form of equipment, technology, supplies and infrastructure.

More than one third of the global population is infected with Mycobacterium tuberculosis, the bacterium that causes TB disease. Tuberculosis remains one of the prominent treatable diseases in Africa. According to a World Health Organization (WHO) TB Report in 2006, Ghana ranks 13th in Africa for the highest estimated number of new TB cases per year. Over 45,000 new cases and over 10,000 deaths were reported in 2004. The abundance of HIV/AIDs is fueling the cases of TB, with over 18% of adult TB cases being HIV-positive. WHO statistics project that this ratio may increase to 59% by 2009, and that an additional 30,000 cases of TB could be attributable to HIV/AIDS annually by 2015.

In 1994, Ghana adopted the World Health Organization's DOTS (Directly Observed Treatment, Short-course) strategy. The World Bank affirms that DOTS is one of the most cost-effective health strategies used to battle TB. The strategy aims to diagnose, register and treat TB with high-quality drugs. It was immediately implemented in Ghana's five-tier public health system. According to the WHO, Ghana achieved 100% DOTS coverage in the year 2000. It is currently in the "maintenance phase" and is expanding to the Stop TB Strategy managed by the WHO and National TB Program (NTB). The strategy has six parts aimed to tackle TB consistently through 2015. The goals are as follows:

### **Pursue high-quality DOTS expansion and enhancement**

- a. Political commitment with increased and sustained financing
- b. Case detection through quality-assured bacteriology
- c. Standardized treatment, with supervision and patient support
- d. An effective drug supply and management system
- e. Monitoring and evaluation system, and impact measurement

### **Address TB/HIV, MDR-TB and other challenges**

- a. Implement collaborative TB/HIV activities
- b. Prevent and control MDR-TB
- c. Address prisoners, refugees and other high-risk groups and situations

### **Contribute to health system strengthening**

- a. Actively participate in efforts to improve system-wide policy, human resources, financing, management, service delivery, and information systems
- b. Share innovations that strengthen systems, including the Practical Approach to Lung Health
- c. Adapt innovations from other fields

### **Engage all care providers**

- a. Public–Public and Public–Private mix (PPM) approaches
- b. International Standards for Tuberculosis Care (ISTC)

Empower people with TB, and communities

- a. Advocacy, communication and social mobilization
- b. Community participation in TB care
- c. Patients' Charter for Tuberculosis Care

### **Enable and promote research**

- a. Program-based operational research
- b. Research to develop new diagnostics, drugs and vaccines

Additional funding is needed to promote greater access to prevention, care and treatment for the disease. To expand DOTS coverage in Ghana, increased financing is essential because the renovation of DOTS facilities is needed and the improvement of existing infrastructure is overdue.

Malaria is another concern for Western Africa and Ghana in particular. Malaria is hyperendemic and accounts for an estimated 45% of outpatient visits in Ghana. It is also estimated that malaria is responsible for 24% of mortality for youth five and under. Unfortunately, the number of reported cases is not representative of all the people in Ghana that have malaria because many are self-treated. In 2004 there were over 3.5 million clinically diagnosed cases of malaria reported, 4000 of which were fatal. Only a half million of those cases were verified by lab tests.

### **Access to Healthcare:**

When Ghana was first recognized as an independent country, all Ghanians had free access to public healthcare. Hospital fees were introduced in 1969, and healthcare costs gradually increased as did poverty levels. In 2003, the government implemented the National Health Insurance Scheme (NHIS) which requires all residents of Ghana to join one of three health insurance schemes: the distinct mutual insurance scheme, the private mutual scheme, and the private commercial health insurance scheme.

The National Health Insurance Council (NHIC) is the independent organization that is tasked with developing and managing the NHIS. The National Health Insurance Scheme has been successful in providing many Ghanaians healthcare at an affordable rate relative to their income. However, the Ghanaian healthcare systems still faces many challenges, particularly due to the country's lack of key medical equipment and trained personnel.

The country currently has an estimated 153 hospitals, not including smaller clinics. There are 22 hospitals in the greater Accra region, 22 in the Ahanti region, 41 in the Brong Ahafo region, 17 in the Central region, 19 in the Eastern region, 11 in the Northern region, 6 in the Upper Eastern region, 9 in the Upper Western region, 18 in the Volta region and 7 in the Western region. The Ministry of Health, represented by the Ghana Health Service, owns half of the country's health facilities. The private sector owns approximately 21% and the Christian Health Association of Ghana owns the remainder.



A recent push by the Ghanaian Government to renovate and reconstruct some of these hospitals has significantly improved the quality of healthcare administered to its people. Increased funding from western countries has helped develop and update hospitals throughout the country. Despite these efforts, there are still more improvements to be made. Disease is still prevalent and doctor/patient ratios remain high. Healthcare costs have improved and therefore greater opportunities exist to administer high quality tests and screenings for certain diseases.

Indicator	Value (2006)
Number of dentistry personnel	393
Number of nursing personnel	19707
Number of health service providers	7132
Number of pharmaceutical personnel	1388
Number of physicians	3240
Physician density (per 10,000 population)	2

### Radiology in Ghana:

Until recently, the priority of implementing more radiology services in Africa has been little to none due to the problem of HIV/AIDS. There has traditionally been more of a need for infectious disease and public health specialists. As a result of this, there simply is a lack of funding and lack of support for radiology as a medical specialty in Ghana. The Ghanaian government has not allocated funding for radiology equipment within its healthcare budget.

Despite this fact, there is a need for radiology services from both public health and primary care. Chest x-ray, for example, is key in TB and infectious disease screening and diagnosis. Extremity x-ray is also important for trauma. According to a recent study by the WHO, chest x-ray and hysterosalpingograms are most common in Ghana. However the study cited a significant need for MRI, CT, and ultrasound equipment. Ultrasound is currently one of the preferred modalities because it is cost effective and mobile. Most equipment, however, is limited to the main clinics in larger cities. Outside these main centers, most x-rays are taken by x-ray technicians and dictated by doctors that do not have stringent training in radiology. This is also the case for other modalities. Other than x-ray, IVPS, hysterosalpingograms and barium meals are most common.

There is very limited documentation on the exact number of radiology equipment in Ghana. It is clear, however, that ultrasound and x-ray are the most widely used modalities due to their ease of use, low cost and minimal maintenance. Ghana does have CT, MRI and other more sophisticated equipment, but it is unclear as to how many are operable.

One challenge that inhibits the funding for radiology equipment and trained professionals lies in the fact that most of Africa relies on outside donors to fund projects and equipment. Even if a clinic gets a new CT scanner, it is not maintained thus rendering the equipment useless within a few years. The WHO is trying to tackle this issue but this requires funding, training, and the technical expertise to handle the equipment. Although funding has increased in recent years, it is not enough to support more focused and reliable radiology services.

In 2007, Ghana acquired a single-photon emission computed tomography (SPECT) gamma camera for Korle-Bu Hospital, one of Ghana's largest teaching hospitals. The addition of specialized equipment like this seems to be an increasing trend and is possible through partnerships between non-profit, private and governmental entities. The availability of PET/CT or other more specialized equipment in Ghana is unclear.

One of the most noteworthy medical projects occurring in Ghana is the building of the multiple medical imaging and treatment centers by Global Medical & Imaging Centres Ltd (GMIC). This company has strategically partnered with companies such as IBM and Siemens to build an "ultra-modern" hospital in Ghana. This center is intended to serve all of Ghana as well as its neighboring countries of Togo, Ivory Coast and Burkina Faso. The proposed facility will have two CT scanners, one MRI unit, one ultrasound Unit and one mammography unit as a base. It was also have a full nuclear imaging center and other services.

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