

HEALTH CARE

IN GHANA

March 2009

ACCORD is co-financed by the European Refugee Fund, UNHCR and the Austrian Federal Ministry of the Interior







This report is based on a timely restricted Internet research in publicly accessible material currently available to ACCORD. The views and opinions stated in the report do not necessarily reflect the views of ACCORD or the Austrian Red Cross.

This paper is not, and does not purport to be, fully exhaustive with regard to health care in Ghana, or conclusive as to the merits of any particular claim of refugee status or asylum. Every effort was undertaken to use the most currently published data – it has to be noted, however, that the report can only reflect the currency of the material available at the time of research.

The statements in this report do not represent an opinion of the Austrian Red Cross on the political situation in the country.

The report is accessible on www.ecoi.net.

12 March 2009

Authors: Abdallah Salisu

Vanessa Prinz

Editorial support: Daisuke Yoshimura

ACCORD

Austrian Centre for Country of Origin & Asylum Research and Documentation

Österreichisches Rotes Kreuz Wiedner Hauptstraße 32 1040 Wien

Tel.: +43 1 58 900 - 582 Fax.: +43 1 58 900 - 589

E-Mail: accord@roteskreuz.at

Web: http://www.roteskreuz.at/accord

CONTENT

1.		COUNTRY PROFILE	4
	1.1.	Geography	4
	1.2.	Socio-Economic Factors	5
	1.3.	Health Status and Demographic Indicators	5
2.		ACCESS TO HEALTH CARE FACILITES	6
3.		COMMON DISEASES	7
	3.1.	Communicable Diseases	7
		3.1.1. Malaria	7
		3.1.2. Tuberculosis (TB)	7
		3.1.3. Hepatitis	8
	3.2	Non-Communicable Diseases	8
		3.2.1. Caridovascular Diseases	8
		3.2.2. Cancer	9
		3.2.3. Diabetes	9
		3.2.4. Kidney Diseases	9
	3.3.	Mental Health	9
	3.4.	Reproductive Health	10
4.		HEALTH SYSTEM ORGANISATION	11
	4.1	Political/Administrative Structure of Health	12
	4.2	Public Health Care System	12
	4.3	Private Health Care System	13
	4.3	Traditional Health Care and Self-Medication	14
		4.3.1. Traditional Medicine	14
		4.3.2. Self-Medication	15
	4.4	Overall Health Care System: Challenges and Planned Reforms	16
5 .		HEALTH CARE FINANCE AND EXPENDITURE	18
	5.1	Health Expenditure Data and Trends	18
	5.2	Insurance and Coverage	
	5.3	Out-of-Pocket Payments	21
	5.4	External Sources of Finance	
	6.5	Provider Payment Mechanisms	22
6.		HUMAN RESOURCES	22
7 .		HEALTH SERVICE DELIVERY	
	7.1	Health Delivery Structure	23
	7.2	Primary Health Care	26
	7.3	Secondary/Tertiary Care	26
8.		PHARMACEUTICALS - Availability and Affordability	27
9.		ABBREVIATIONS	29
10	•	REFERENCES	30

1. COUNTRY PROFILE

1.1. Geography

Situated on the Gulf of Guinea in the south of the West African sub-region, Ghana is bordered by the Republic of Togo, the Ivory Coast and Burkina Faso. It has a total land area of 239,460 km². The vast majority of the country's land is tropical and partly savannah land. (CIA, 5 March 2009)

A United States Census Bureau estimate for 2008 shows Ghana's population at 23.4 million, with half the population being below the age of 15. The current growth rate of the population is estimated at 1.9 per cent (US Census Bureau, 2008).

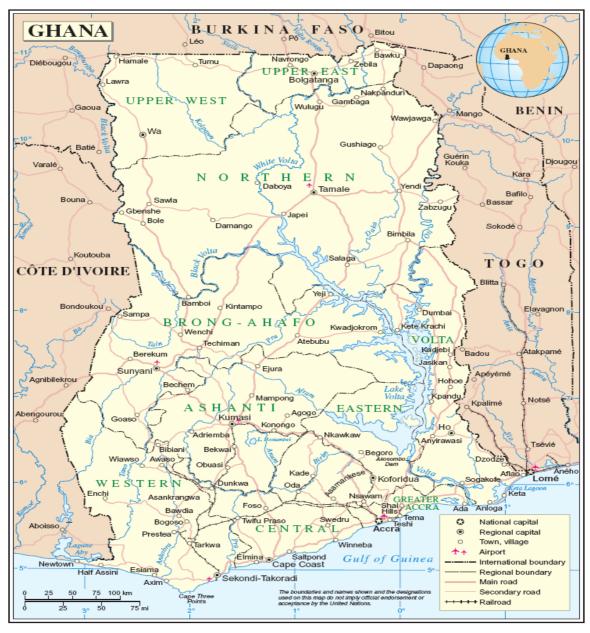


Fig. 1: Map of Ghana

Source: UN Department of Peacekeeping/ Cartographic Section, February 2006

1.2. Socio-Economic Factors

Sector of Employment (per cent)					
Public	5.9				
Semi-public / Parastatal	2.9				
Private formal	7.8				
Private informal	80.4				
Other	3.0				
Source: Ghana Statistical Service, 2008					

Tab. 1: Sector of employment

Several socio-economic factors might pose a challenge to a health insurance system in Ghana, the most obvious being that a majority of economically active people work in the informal sector. Since this is a field of employment that cannot be thoroughly regulated, it is difficult for the government to track and reimburse the insurance system. Table 1 shows employment in the private informal sector to constitute 80.4 percent of overall employment in 2008.

According to the ILO programme "Decent Work Pilot Programme (DWPP)" initiated in 2006, "four out of every ten Ghanaians can be classified as poor", i. e. 8 million people living in Ghana are poor. Furthermore, "[b]etween 25 to 30 per cent of the people who depend on the informal economy for their livelihood are poor, making them the second largest group of poor after subsistence farmers." The ILO said the sector is mainly marred by deficit in decency and low and unstable incomes. (ILO, 5 May 2006)

On a macro-economic level, Ghana still depends on traditional natural resource export for the majority of its national income (GEPC, 23 May 2007, p. 13). Though it has remained stable and on growth course, it is said to be vulnerable due to heavy reliance on foreign borrowing (Ghana Today, 2 September 2008). Ghana's annual per capita income stands at about US\$600 (IRIN, 22 July 2008). Real GDP growth was 6.3 per cent at the end of 2007 and per capita growth went up from 2.8 per cent in 2006 to 4 percent in 2007. The economy is mainly dependent on agriculture, largely subsistent and accounting for 35 percent of the GDP with 60 percent of employment (Hepnet, 30 May 2007).

1.3. Health Status and Demographic Indicators

Health Metrics Network, an independent body which undertook a review study of the Ghana health system in April 2005 after two years of implementation, noted that "given the low coverage of vital events registration, statistical analysis of the data is necessarily limited" (HMN, April 2005, p. 2).

44 per cent of the population is below the age of 15 while only 5 per cent is above the age of 65. There are slightly more women (53 per cent) than men (47 per cent) in the overall population. Life expectancy at birth for a Ghanaian was estimated at 57.7 years: 55 years for males and 59.2 years for females" (MOH, undated, p. 8). "Infant mortality¹ worsened from 64 per 1000 live births in 2003 to 71 in 2006" (US Census Bureau, 2008). Ghana recorded an under-five mortality rate of 111 per 1,000 live births in 2006 (MOH, undated, p. 8).

_

¹ Under-one-year mortality

Health indicators by the World Health Organisation (WHO) (see Table 1.2.) point out some of the major challenges:

Indicators	Value	Year			
Adult mortality rate (between 15 to 65 years per 1000 population)	331	2006			
Death due to tuberculosis among HIV negative per 1000 population	41	2006			
Death due to HIV per 1000 population	131	2005			
Life expectancy at birth (years)	57.0	2006			
Antiretroviral coverage among people with advanced HIV (%)	12	2006			
Antiretroviral therapy coverage among HIV-infected pregnant women for PMTCT (%)	8	2006			
Children aged < 5 sleeping under insecticide-treated net (%)	21.8	2006			
Birth attended by skilled health personnel (%)	50	2006			
Population with sustainable drinking water source Rural (%)	71	2006			
Population with sustainable drinking water source Urban (%)	90	2006			
Population with sustainable drinking water source Total (%)	80	2006			
Registration coverage of death (%)	<25	2006			
Source: World Health Organisation, (WHO Database), (accessed 19 September 2008);					
who.int/whosis/database/core/core_select_process.cfm					

Tab. 2: selected core indicators available for the year 2006 (latest in WHO statistics)

Due to their pervasiveness, sanitation related diseases pose a particular problem to the country's health system: The Ghanaian Chronicle reported that 82 per cent of the entire population lacked proper toilet facilities in 2008. The newspaper went on to say that "the country's sanitation coverage stood at 10 per cent as at the end of 2006" (Ghanaian Chronicle, August 21 2008). Basic sanitation related diseases continue to rise. The national health insurance authorities say 80 per cent of the cases burdened on the scheme are sanitation-related (Public agenda, 1 September 2008). Curable illnesses such as malaria continue to be highly fatal for Ghanaians (see chapter 3.1; IRIN, 11 August 2008).

2. ACCESS TO HEALTH CARE FACILITES

For a population of a little short of 23.5 million people, there are only 1,439 health care facilities (IRIN, 5 August 2008). A study by van den Boom et al. compiled in 2004 noted that access to these facilities remained a problem: Medical facilities were not evenly distributed across the country, with most rural areas lacking basic facilities such as hospitals and clinics as well as doctors and nurses. The study further said that "Ghanaians on average live about 16 km from a healthcare facility where they can consult a doctor, but half of the population lives within a 5 km radius. By the same token, the other half cannot consult a doctor within 5 km, which corresponds to a 1 hour walking distance, and one quarter even lives more than

15 km from a facility where a doctor can be consulted." The Government of Ghana embarked on a health sector reform in the early 1990s to improve the accessibility and quality of services. However, "the health situation in Ghana is still far from satisfactory." Many people in the country still rely on self-medication (van den Boom et al., October 2004, p. 1, 4, 20, 21).

Projects to raise accessibility, however, are underway: The Minister of Health told Parliament in December 2007 "that the Ministry has established 176 health infrastructure projects within a period of five years. This includes 50 Health Centers comprising 22 District Hospitals and 26 Community Health Planning Scheme (CHPS)"(Ghana Parliament, 18 December 2007). Data on the progress of this project were not available at the time of research.

3. COMMON DISEASES

3.1. Communicable Diseases

In 2008, malaria, a curable illness, continued to be the disease claiming the highest number of victims, "followed by HIV/AIDS, diarrhoeal diseases, lower respiratory infections, and perinatal conditions. These five diseases account for 50% of all deaths in Ghana, and 68% of deaths among children under 14 years old" (WRI, March 2008, p. 2). The Ghanainan newspaper the Statesman said Ghana still occupied the second place behind Sudan on the list of Guinea Worm infected countries (The Statesman, 26 January 2008).

3.1.1. Malaria

Comparable to many other African countries, malaria is the number one killer of Ghanaians (IRIN, 11 August 2008). In an older report, IRIN noted that "about 3 million of Ghana's 20 million population seek treatment for malaria each year" (IRIN, 17 January 2005). According to WHO, more people continue to develop resistance against chloroquine, which forms the first line of treatment of malaria. Therefore, "officials have decided to tackle the mosquito-borne disease by switching to the more expensive artesunate-amodiaquine as the first line of treatment" (IRIN, 17 January 2005). WHO said that by 2002, some 23.2 per cent of the people in Ghana had developed resistance to chloroquine. With the assistance of WHO, the government introduced a new artemisinin-based combination therapy (WHO, 13 March 2006), which now costs US\$ 1.30 compared to "the previous US\$ 0.10 to treat a single case of malaria" (IRIN, 17 January 2005).

3.1.2. Tuberculosis (TB)

Tuberculosis (TB) has long been among the six killer diseases listed by the ministry of health. Therefore Ghana is a member of the WHO's Directly Observed Treatment Short course (DOTS), which was implemented in 1994 countrywide (GHS, undated-f). Treatment of Tuberculosis at health centres in the country is free, still Ghana recorded 697 TB related deaths in 2006. TB accounts for about 40 per cent of AIDS deaths in Africa (Ghanaian

Chronicle, 29 April 2008). Experts, sector workers and traditional leaders in the country have called on the government to declare it an emergency disease in the country until solutions are found (GNA, 4 August 2008).

Studies showed that "[c]ompliance with effective treatment within a couple of weeks makes a previously infectious patient non-infectious. On the other hand, non-compliance with treatment may lead to persistence and resurgence of TB and is regarded as chief cause of relapse and drug resistance. Non-compliance also results in [...] increased morbidity and increased cost to TB control programmes." Due to the socio-economic situation of most infected people in Ghana, non-compliance with treatment patterns occurs frequently: "A quantitative review on treatment default at Effia-Nkwanta Regional (ENR) Hospital [in the Western region] [...] revealed that the defaulter rate in 2000 to 2001 was 13.9 per cent" of all those who committed initially to treatment of TB. Financial difficulties were cited as the main reason for defaulting. Also, "defaulters had poor knowledge about TB and reported lack of social support during treatment" (HRU, May 2005b, p. 8).

3.1.3. Hepatitis

Treatment for viral hepatitis is, according to a report by the Ghanaian Times of October 2007, not covered by the National Health Insurance Scheme (NHIS). Accordingly, a physician at the Korle-Bu teaching hospital "underscored the need to widen the National Health Insurance Scheme to cover Hepatitis B treatment in order to encourage people to know their status and seek treatment" (The Ghanaian Times, 6 October 2007). The Ghana Hepatitis B Foundation (GHBF), which mainly focuses on information dissemination on preventative measures and immunisation was formed a month prior to the physician's appeal. It also made its aim to get Hepatitis B on the list of illnesses covered by the National Health Insurance Scheme (GHBF, 2008).

The GHBF and other hepatitis prevention measures in Ghana focus on the hepatitis B virus. Numerous researches have proven the prevalence of the B virus in West Africa in general and in Ghana in particular over a long period of time. The British Medical Journal in 1971 concluded that "the increase of hepatitis in Accra since the second world war has accompanied the development of shanty towns with poor sanitation" (Morrow et al., November 1971, p. 389). Despite the long history of Hepatitis in Ghana, larger initiatives to tackle the problem are relatively young. According to its own reports, the GHBF started its operation in September 2007. The foundation also indicated that it is the only organisation active against the disease on a permanent basis in the country (GHBF, 2008). WHO data shows that a vast majority of all children was immunised in 2006 (WHO, May 2008).

3.2 Non-Communicable Diseases

3.2.1. Caridovascular Diseases

According to the WHO, cardiovascular diseases (CVD) are becoming more and more dangerous to poor countries as well. It said that these could be more dangerous in developing

countries because "an important phenomenon of CVD in developing countries is the trend of complications occurring at younger ages. Thus, stroke, cardiac failure and renal failure further fuel the vicious cycle of ill-health and poverty" (WHO, 17 June 2005, p. 1). Reports indicate that heart conditions are not treated under the National Health Insurance Scheme (GNA, 22 June 2005; CBC, 23 June 2005).

3.2.2. Cancer

Breast and cervical cancer are said to be prevalent among Ghanaian women. Personnel shortages and a lack of awareness are huge problems and cancer cases are mostly presented for treatment in an advanced stage only (IAEA, 17 January 2005; see also BBC World News, 12 June 2008 and NCRNM, 2004).

3.2.3. Diabetes

A study on Ghana's Brong Ahafo Region revealed that diabetes is a major cause of adult disability and death in Ghana. The study said, "recent studies and policy discussions strongly attribute the burden of diabetes to deficiencies in health systems, which include high medical costs, unavailability of drugs, and poorly staffed and financed diabetes services and poor patient practices, chiefly biomedical non-compliance and healer shopping for ethno-medical treatments." It also stated "poor patient practices to problematic cultural beliefs (such as spiritual causal theories) and poor knowledge of the clinical complexities of diabetes" at health centres (Cambridge University, 1 October 2005).

According to the Ghana Diabetes Association (GDA), "diabetes has been recognized as the cause of prolonged ill health in at least 2.2 million Ghanaians and threatens 50 per cent of all Ghanaian patients". Intensive therapy, directed at the control of blood glucose and blood pressure are the main containment approaches used in Ghana and many other developing countries (Public Agenda, 1 November 2007). Cost of therapy is included in the National Health Insurance Scheme (CBC, 23 June 2005).

3.2.4. Kidney Diseases

Acute and chronic renal failure as well as other kidney diseases are not covered by the National Health Insurance Scheme (GNA, 22 June 2005; CBC, 23 June 2005).

3.3. Mental Health

WHO estimates that "of the 21.6 million people living in Ghana, 650,000 are suffering from a severe mental disorder and a further 2.166,000 are suffering from a moderate to mild mental disorder. The treatment gap is 98 per cent of the total population expected to have a mental disorder" (WHO, 2008). One of the reasons said to be making it difficult for mental health practice is the traditional stigma attached to mental health. The traditional healing of mentally ill patients in Ghana gives rise to disturbing trends. "In Ghana, the proliferation of spiritual

churches, prayer camps and other unorthodox institutions have become threats to patient's rights and appropriate treatment" (WHO, 2006). The Acting Medical Director of the Pantang Psychiatric Hospital, Dr. Anna Dzadey, "disclosed that more often, mental health patients are kept in police custody for a prolonged period of time without any legal reason, before being brought to the hospital for evaluation and treatment" (Public Agenda, 7 April 2006).

According to the Africa Office of the Commonwealth Human Rights Initiative (CHRI), human rights violations in prayer camps are widespread in Ghana "in the form of chaining, beating, insults, denial of food and lock-ups in crowded rooms." The report said that "Maj. Courage Quashigah (Rtd), Minister of Health, has said that his outfit was preparing various health bills that included a bill on traditional, psychic and faith based healers." It is expected that the bill will become a law, which would allow the country to regulate and monitor such practices (Public Agenda, 15 August 2008).

3.4. Reproductive Health

Reproductive health remains a big issue in the health sector in Ghana. Despite the fact that neo- and antenatal care are covered by the national insurance scheme (CBC, 23 June 2005), only 35 per cent of all deliveries are attended by a qualified medical practitioner, the remaining 75 per cent [sic!] of women either deliver at home or seek traditional help (IRIN, 5 August 2008).

According to a conference report on reproductive health and the reduction of maternal and infant mortality and morbidity, available statistics for Ghana "indicate that there are 2,800 midwives working in the various health facilities in the country and it is feared that 90 per cent of the number will retire from the service in the next two to four years. This will also create a gap of 3,500 midwives needed to deal with the critical issues of child mortality and morbidity, as there is already a shortfall of 700 midwives in the country" (Daily Graphic, 15 November 2007).

While a section of the media reported progress in prenatal and antenatal care in early 2008, another section raised a pessimistic eyebrow towards the issue. The newspaper Public Agenda reported in March 2008 that there has been success recorded through an "integrated approach of cost-effective strategies" combining "immunisation, infant and young child feeding, management of childhood illnesses and improved antenatal care" (Public Agenda, 10 March 2008). However, in August of the same year, an article by the Ghanaian Chronicle said "the rate of maternal deaths is on increase, owing to certain incidences beyond the control of those in charge. The WHO estimates that "560 pregnant women will die out of every 100,000 that go into labour" (IRIN, 5 August 2008). The Ghana Health Service (GHS) discloses "in its monthly health programme on reducing maternal death, Partnership for Action [...] that, for every 10,000 [sic!] births in the country, over 214 Ghanaian women die in the process of delivery" (Modern Ghana, 7 August 2008). IRIN reports that among rural communities in the

hardest hit areas in the north of the country, the maternal death rate was 700 per 100,000 live births (IRIN, 5 August 2008).

According to IRIN, observers say that "Ghana has one of Africa's most liberal abortion laws but because of lingering stigma, fear and misunderstanding, safe, affordable abortion services remain virtually non-existent and unsafe abortion is a major cause of death" (IRIN, 12 October 2007).

4. HEALTH SYSTEM ORGANISATION

The healthcare system is organised under four main categories of delivery systems: public, private-for-profit, private-not-for-profit and traditional systems. Though the former three are mostly associated with healthcare delivery in Ghana, efforts are being made since 1995 to integrate traditional medicine into the orthodox mainstream (see Abor, P.A.; Abekah-Nkrumah, G.; Abor, J., 2008).

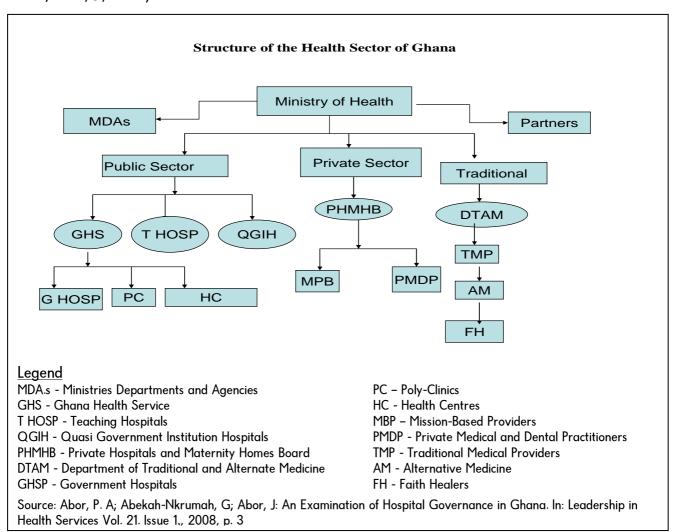


Fig. 2: Structure of the health sector of Ghana

4.1 Political/Administrative Structure of Health

The constitution of Ghana provides that "the state shall safeguard the health, safety and welfare of all persons in employment, and shall establish the basis for the full deployment of the creative potential of all Ghanaians" (Republic of Ghana, 1992, Article 36/10). The current nationwide health insurance scheme is based on the parliamentary bill "ACT 650 and LI 1809" (National Insurance Act), which was passed into law in August 2003. The National Health Insurance Scheme (NHIS) was formally launched in December 2004 (Hepnet, 30 May 2007)².

Health Administration in Ghana is divided into three administrative levels: the national, regional and districts levels. It is further divided into five functional levels of national, regional, district, sub district and community levels. All the levels of administration are organised as Budget and Management Centres (BMCs) or cost centres for the purpose of administering funds by the Government and other stakeholders. There are a total of 223 functional BMCs and 110 Sub-Districts BMCs. With the headquarters of the Ghana Health Service (GHS) also managed as a BMC, there are 10 Regional Health Administration, 8 Regional Hospitals, 110 District Health Administrations and 95 District Hospitals. All of these are run as BMCs (GHS, undated-b).

The Ghana Health Service (GHS) is in charge of transport, equipment and infrastructure provision, delivers information and provides "support and guidance for the design of policies and strategies" to the Ghana Health Service Council (GHS, undated-a). The activities of the various organs under the Ghana Health Service are coordinated and administered by the Ghana Health Service Council supervised by the Minister of Health. Its main objectives are to "implement approved national policies for health delivery in the country, increase access to improved health services and manage prudently resources available for the provision of health services" (GHS, undated-d). External contributors of the health service such as the National Health Insurance secretariat and the auditing offices and controlling services work directly with the council (GHS, undated-c). The Health Ministry is responsible for policy planning processes and information management, particularly concerning the areas of financing, human resources and infrastructure (MOH, March 2008, p. 2-3).

4.2 Public Health Care System

The public health care system of Ghana is operated through the National Health Insurance Scheme (NHIS), which permits the operation of three types of insurance schemes, including District-Wide (Public) Mutual Health Insurance schemes in all of the country's 110 districts, private mutual insurance schemes and private commercial insurance schemes. However, only the District-Wide (Public) Mutual Health Insurance schemes are financially supported by the NHIS (Hepnet, 30 June 2007).

_

²cp. Republic of Ghana: National Health Insurance Act, 2003 http://www.nhis.gov.gh/_Uploads/dbsAttachedFiles/Act650original2.pdf (accessed 15 September 2008)

The public health system faces a variety of obstacles, among them shortages of personnel (see chapter 6) and funding, as well as an unequal distribution of health workers in the country's regions (van den Boom et al., October 2004, p. 4). The country's most densely populated region, the Western Region, accommodates 10 per cent of the population but only 99 doctors. There are 91 doctors living in the Volta Region and 33 in the Northern Region, compared to 1238 public and private medical as well as dental practitioners in the Great Accra Region (Ghana Home Page, undated; GMA, undated).

Corruption seems to be another major problem in Ghana's public health care system: In its 2006 Global Corruption report, Transparency International (TI) "has identified the health sector of Ghana as a corruption prone area with evidence of bribery and fraud across the breadth of medical services. This is said to have emanated from petty thievery and extortion, to massive distortions of health policy and funding, fed by payoffs to officials in the sector" (Ghanaian Chronicle, 2 February 2006).

A study carried out in selected rural communities revealed that other factors such as traditional believes, social stigma, poverty and illiteracy still stand in the way of proper healthcare delivery. For example, in a study on payment of health insurance conducted in the Kassena Nankana District in Northern Ghana, some of the respondents said that "contributing money for illnesses yet to come was not appropriate as that in itself could invite more illnesses." (HRU, May 2005a, p. 7). Another study in a district hospital revealed that people with leprosy and tuberculosis defaulted treatments due to social stigma, lack of funds and/or the need to fend for themselves or others (HRU, May 2005b, p. 8).

4.3 Private Health Care System

Treatment on private basis costs approximately US\$10 per session, and the average income of Ghanaians was about \$1.5 per day (van den Boom et al., October 2004, p. 8). A 1995 report mentions that, whereas the missions (Christian and Muslim health services) treat the poor free of charge, most private medical practitioners such as herbalists, fetish priests and some orthodox private practitioners apply charges, the amount of which "vary widely" (Asenso, 1995).

The operation of private mutual insurance and private commercial insurance schemes are permitted by Ghana's National Health Insurance Scheme, along with that of District-Wide (Public) Mutual Health Insurance schemes (see Chapter 4.2.), in order to give Ghanaians "the opportunity to join a health insurance scheme of their choice" (IRIN, 18 March 2004).

A survey conducted between August and October 2005 by the Ecumenical Pharmaceutical Network (EPN) found that "faith-based health services in Ghana provide approximately 40% of the available health care." It quotes a report by the Christian Health Association of Ghana (CHAG), according to which "the church health care facilities in Ghana number[ed] 56 hospitals and 83 clinics at the time of research" (EPN, undated).

The larger religious organisations such as the Catholic and Presbyterian churches offer their own orthodox medical insurance schemes, through which public screening, vaccination, treatment and awareness are organized. programmes **Particularly** operate Christian organisations hospitals and clinics, mostly in rural areas, small towns and, rarely, in regional capitals

	Share of health care
Faith	in Ghana
Catholic	27%
Other Christian churches	11%
Muslim	1-2%
Source: EPN, undated (sourced	5 Sept. 2008)

Tab. 3: Faith-based health care in Ghana

and urban centers. Christian healthcare delivery organisations which are regognised as such by the government fall under the leadership of the Christian Health Association of Ghana (CHAG)³. 45 to 60 per cent of the total operational revenues of the Christian faith based health sector come from subsidies from the government (CHAG, undated, p. 9). According to CHAG, a precondition for access to this insurance scheme is the Christian faith, the scheme is thus open to Christian Ghanaians only.

Islamic organisations maintain a relatively low percentage of the private health care delivery in Ghana. Beside the Islamic Republic of Iran which runs a clinic in the country (ICRO, 18 May 2007), other organisations such as the Ahmediyyah Muslim Mission of Ghana, organise medical aid programmes and implement health care delivery projects such as free medical care on temporary basis (GNA, 14 July 2008).

4.3 Traditional Health Care and Self-Medication

4.3.1. Traditional Medicine

In Western countries, a common perception is that traditional medicine serves as an auxiliary to orthodox medicine. Traditional medicine however, overshadows orthodox medicine in many developing countries. "Traditional medicine", according to WHO, "refers to health practices, approaches, knowledge and beliefs incorporating plant, animal and mineral based medicines, spiritual therapies, manual techniques and exercises, applied singularly or in combination to treat, diagnose and prevent illnesses or maintain well-being" (WHO, May 2003). According to a 2003 WHO estimate, "[i]n Africa, up to 80% of the population uses traditional medicine for primary health care" (WHO, May 2003). Furthermore, "[t]raditional practices such as homeopathy, naturopathy and osteopathy are already better integrated into Ghana's health system than in other African countries" (SciDevNet, 16 May 2007).

As of May 2007, the NHIS was yet to cover over half of its targeted people (coverage was estimated at 41 per cent, Hepnet, 30 May 2007). With often inaffordable cost of treatment,

_

³ A list of member organisations of CHAG is available under http://www.chagghana.org/members.asp (accessed 2 February 2009).

traditional medicine therefore still remains important in Ghana (van den Boom et al., October 2004, p. 4.).

In Ghana, as in other countries, WHO is collaborating with the government to integrate this type of medicine into orthodox medicine (WHO, May 2003). Studies have indicated that, in the two and a half decades since the introduction of on the spot payment for health delivery, more than half of the country's patients have turned to traditional and self-medication (van den Boom et al., October 2004, p. 4).

A 2007 article by the news platform on science and technology in developing countries Science Development Network quotes a journalist arguing that "integrating traditional medicine into Ghana's healthcare system is essential to improving the delivery of health services in the country." Recognising that with the challenges facing the country's health delivery, it can augment the system and play an important role. He said that with health workers' "frequent strikes and their migration elsewhere in search of better pay", integrating traditional medicine into the NHIS would play a vital role. "The author suggests this burden could be lightened by Ghana's roughly 45,000 traditional healers, most of whom are licensed through national practitioners associations." He noted, this type of medicine "is culturally accepted and accessible to 80 per cent of Africans. In Ghana a large proportion of the population rely exclusively on this type of healthcare, particularly in rural areas" (SciDevNet, 16 May 2007).

As much as the traditional medical practices augment the orthodox national health care service, they also present problems to government's efforts to offer universal healthcare in the country. Particularly challenging are those who mix orthodox and traditional medicine (i.e. herbal treatment and religious prayers). They are known in the country as healing churches. Many of these groups claiming to have spiritual powers for healing physical and mental illnesses eventually end up maltreating patients and abusing their rights (Public Agenda, 15 August 2008). Meanwhile, a report mentions that "Ghana Health Service (GHS) outreaches over the past few years have convinced some members of the Kpale (Xorse) Faith Church at Kpale, in the Ho Municipality of the Volta Region [the Eastern province of Ghana]" whose faith taught them to "refuse orthodox medicine either for curative or preventive purposes", to change their attitude and "report at healthcare facilities and use prescribed drugs when sick." (GNA, 1 June 2008).

4.3.2. Self-Medication

The World Health Organization stated in 1998 in a booklet defining the role of pharmacists in self-help and self-medication that "in many developing countries, the ratios of pharmacists and pharmacies to population are so low that access to pharmaceutical care is impeded. In such cases, consultation with other health workers or community health care workers, household carers and other appropriate lay people, provided they have received the appropriate pharmaceutical training and orientation, should be encouraged" (WHO, 1998).

However, reports indicate that in Ghana the issue goes further than seeking advice from those who substitute the lack of personnel. For instance, self-medication in Ghana, according to van den Boom et al., has three dangerous patterns: firstly, self-medication may be forced on patients due to their socioeconomic conditions; secondly, they might consume leftover and often expired drugs; thirdly, untrained chemical sellers might take "experts roles" and decide upon their clientele's medication (van den Boom et al., October 2004, p. 8). The Ghanaian Chronicle noted that "[i]t has become common these days to see quack pharmacists jumping from one [...] bus to the other, selling drugs to unsuspecting public" (Ghanaian Chronicle, 30 July 2008). Frequently, "when ill, Ghanaians also apply self-medication rather than consult a provider. The patient may go to a drug store or a drug peddler and buy drugs on the advice from the operators whose healthcare knowledge is sometimes questionable (UNICEF, 2002). After the introduction of user fees in 1985, self-medication has become more popular among the entire populace as a means to economize on consultation fees and transport costs" (van den Boom et al., undated, p. 3).

4.4 Overall Health Care System: Challenges and Planned Reforms

Among other socio-economic priorities, health is one of the issues that are at the forefront of the Millenium Development Goals (MDGs), which Ghana hopes to fulfil by 2015. The Government therefore prioritised health issues within the MDGs, three of which deal with health issues. The fourth of the goals of the MDGs is to reduce under-five mortality rate to two-thirds by 2015; the fifth goal is to reduce the maternal mortality ratio by three-quarters by 2015, and the sixth is to try and to reduce infection rates of HIV/AIDS, malaria, and other communicable diseases associated with hygiene and environment by 2015. All of these have been made primary health goals, which the government has sought to integrate into community level health care (Public Agenda, 6 February 2008). The main challenge in achieving the health-related MDGs, according to the ministry of health "is to increase overall coverage and to reach the poor more effectively". However, Public Agenda newspaper observed that "it appears [...] that despite the policy of focusing on primary health care, most of the increased spending in the health sector in recent years has gone into other sectors to the neglect of the primary health component" (Public Agenda, 6 February 2008).

The newspaper Public Agenda reports that "[d]espite the overall increase in health-sector expenditures, [a] 2006 sector review spoke of the persistent under-achievement in terms of targets." It refers to a November 2007 report based on a "joint effort by the Brookings Institution Transparency and Accountability Project (BITAP) and the Integrated Social Development Centre (ISODEC)", saying that "[o]verall, the primary health sector budget has declined from 70.5% in 2001 to 63.9% in 2006." The document also indicates that "it is time for the Ghana government to commit itself to allocating more funds to investment expenditure in the health sector. This will ensure some stability in development project implementation even when there is donor apathy" (Public Agenda, 6 February 2008).

Professor Agyeman-Badu Akorsah, director-general of Ghana Health Services, has called the achievements of the country health sector a "mixed success in its bid to achieve equal healthcare for all" (VOA, 28 February 2007). Overall, and despite massive efforts by the government, the health care system is still characterised by underfunding and a lack of personnel: The Ghana Health Service acknowledges that there is an "urgent need for additional health facilities and more qualified health personnel, especially in rural communities" (IRIN, 5 August 2008).

Reports have indicated that some of the main problems in the health care system of Ghana are created by simple sanitation related diseases (Public Agenda, 1 September 2008; Ghanaian Chronicle, 21 August 2008). Other important factors augmenting disparities between the delivery structure and its applicability in the health industry of Ghana range from nepotism, favouritism, and corruption to sometimes tribalism. In its 2006 annual Corruption report, Ghana Integrity Initiative (GII), the local chapter of the international anti-corruption body Transparency International said the health sector of Ghana is "a corruption prone area with evidence of bribery and fraud across the breadth of medical services. This is said to have emanated from petty thievery and extortion, to massive distortions of health policy and funding, fed by payoffs to officials in the sector" (Ghanaian Chronicle, 2 February 2006).

Some of the systematic problems of Ghana's health sector are addressed by the 1995 Medium Term Health Strategy (MTHS) and the subsequent Sector Wide Approach (SWAp), which seek to reform the health financing system. One particular area the reform emphasises is to "strengthen [...] the district health capabilities and their financial management systems" (Asante et al., 17 August 2006). A financial management reform followed SWAp and "shifted management responsibilities to the district level and granted greater control over funds to local managers." District Health Administrations (DHAs) continue to receive and directly manage "funds for non-salary recurrent expenditure" under the concept of Budget Management Centres. Asante et al. noted that "while this has been hailed as a boost to district health delivery, release of funds to districts has remained untimely and unpredictable. First quarter allocations expected in January are often received in the second quarter, sometimes as late as June. Fourth quarter allocations may not be received at all. This erratic flow of funds to district health services threatens to offset any potential benefits from the reforms" (Asante et al., 17 August 2006).

In 2005, the government increased wages of health sector workers; the payment, however, does not reflect household income needs of the workers (Witter et al., 22 January 2007). Generally, the subject of payment mechanisms for workers of the health sector attracts mixed receptions: In 2005, a survey was carried out in two regions of Ghana on health workers' income and its influence on their motivation. The result showed a general change in attitude since the introduction of the scheme. Health workers were said to have shown a strong commitment and worked longer hours (Witter et al., 22 January 2007). Their workloads have increased but have not affected morale, as "the increase in workload for public sector health workers has been matched by an unrelated pay increase" (Witter, March 2008). The study found out that health workers have experienced a pay rise higher than those of other public

sector workers. When asked about the NHIS, the health workers expressed mixed feeling about the scheme. Though they appreciated their wage increase, they maintained that the delivery of payment was unreliable. They warned that unreliable government payments "are jeopardising sustainability" (Witter, March 2008).

A 2005 study identified health information and data handling as a core part of health care delivery and said, that "the single most frequently quoted constraint to improved health information is human resources availability and capacity at all levels, national, regional and district." According to the study, people with advanced skills in health information and data handling were seriously needed in the system. The study also said the Ghana Bureau of Statistics which handles these data is overstaffed with under-qualified personnel lacking the proper skills for health information management (HMN, April 2005, p. 3).

5. HEALTH CARE FINANCE AND EXPENDITURE

5.1 Health Expenditure Data and Trends

In a research report published in 2006, Augustine Asante described the mode of budget allocation as follows: "The pattern of allocation of the previous year is used as a guide for the current year's allocation. It has little bearing with the health needs of the population. Despite policy commitment to enhance the resource allocation formula to incorporate health needs, poverty and gender issues, only minor changes have been made" (Asante et al., 17 August 2006). However, the Government has recently changed its strategy in resource allocation by prioritising a "pro-poor and needs-based resource allocation in the health sector. The MOH ring-fences part of the health budget and lodges it with specific Budget and Management Centres (BMCs) to protect critical service areas from the risk of under-funding. [...] The ringfencing is also used to ensure that resource allocation patterns reflect national poverty alleviation and equity commitments" (Asante et al., 17 August 2006). A "significant portion" of the pro-poor funding strategy goes into ensuring that exemptions are paid for among other things, "maternal deliveries and Guinea Worm eradication in northern Ghana." However, according to Asante, much of these efforts in "resource allocation in the Ghanaian health sector remains inadequately reflected on the health needs of the population, and to date, only few indicators of need are included in the allocation criteria" (Asante et al., 17 August 2006).

The funding of the insurance scheme is based on a system called "cross-subsidisation." In this payment system, "the rich" is supposed to "subsidize[...] the poor", "the healthy subsidises the sick" and "the economically active adults pay for children, indigents and the aged" (70 years and above) (Hepnet, 30 May 2007). Through the Social Security and National Insurance Trust (SSNIT), workers contribute 2.5 percent of their salaries. Additional funding comes from a 2.5 per cent value added levy on selected goods and a "[m]inimum premium of 72,000 Cedis (US\$ 7.74) per annum from informal workers" (Hepnet, 30 May 2007). Aside from these

payments, other consolidated funds are used to finance the scheme. "Donations, grants, gifts and other voluntary contributions" are also added to fund the scheme (Hepnet, 30 May 2007).

5.2 Insurance and Coverage

With a health expenditure (NHIS budget) of US\$ 10 to 17 Mio. annually, part of which is subsidised by international donor initiatives, the main aim of the scheme is to provide basic health care for the country's poor (CBC, 23 June 2005). Being a new scheme with limited funds, it focuses on communicable diseases. An estimated 20 to 50 per cent of inpatient admissions, and up to 50 per cent of outpatient visits are cases of Malaria (Adams et al., October 2004, p. 33).

According to the scheme, Ghanaians are supposed to "pay an annual fee according to their income – keeping in mind the minimum wage is about US\$1.50 per day" (CBC, 23 June 2005). Poor people contribute about US\$ 10 annually, workers in the formal sector pay 2.5 per cent of their social security contribution. "The government covers the aged, indigent and children whose parents pay into the scheme. Financing comes through a 2.5 percent National Health Insurance Levy on selected goods and services. It is also funded by the Highly Indebted Poor Countries Initiative" (CBC, 23 June 2005).

Three types of insurance schemes exist under the National Health Insurance Scheme:

- A District-Wide (Public) Mutual Health Insurance scheme through which the workers of the public sector directly pay a share of their wages into the health insurance system;
- a "Private Mutual Health Insurance scheme" through which subsistent farmers, people
 working in the informal sector and unemployed people who were not formerly
 employed in the public sector are to pay their contribution; and
- a "Private Commercial Health Insurance Scheme" through which those employed by larger companies and multi-national companies pay their contributions (Hepnet, 30 May 2007).

Within these schemes, the health insurance programme offers the following benefits package:

- "Full OPD [Out Patient Department] and admission treatment (surgery and medical)
 cost including feeding" are catered for if listed on the scheme;
- "Full payment for medicine if within the approved list."
- Payments for referrals (gatekeeper system) are taken care of "provided it is within inclusive list".

The exclusion list of stipulations, i.e. treatment not covered by the scheme, entails:

- "Appliance, prostheses, rehabilitation, dentures, organs aids, cosmetics surgery and assisted reproduction";
- "HIV retroviral drugs, hormone and organ replacement therapy";
- "Heart and brain surgery other than accidents";
- "Dagnosis and treatment abroad", as well as
- "Dialysis for chronic renal failure and cancers" (Hepnet, 30 May 2007).

However, an earlier report indicates that the government does subsidise about 90 per cent of the costs of anti-retroviral therapy for HIV/AIDS patients (VOA, 16 August 2006).

Dr. Sam Akor, Executive Secretary of the National Health Insurance Council (NHIC) said at a presentation that "the scheme would cover all common diseases in all the district hospitals in the country. However, he said, apart from emergencies, the scheme would not cover conditions such as heart and brain surgeries, chronic renal failure, provision of antiretroviral drugs and treatment for opportunistic infections." He also disclosed that the primary goal of the scheme is to provide equity in the health sector and to provide affordable health care for the poor (GNA, 22 June 2005).

The Canadian Broadcasting Corporation (CBC) reported that the "NHIS covers the main reasons Ghanaians go to the doctor: for child and maternal care, nutritional needs and treatment for conditions such as malaria and diabetes. But it won't cover some types of specialized health care, including treatment of chronic renal failure, heart and brain surgery" (CBC, 23 June 2005).

The Ghanaian Times reported in August 2006 that in July 2006 the NHIS had started to cover the costs of referral cases to tertiary health centres. It said "the Korle-Bu Teaching Hospital has started receiving referral cases from other mutual insurance schemes for the implementation of the National Health Insurance Scheme (NHIS). It noted that a "total of 656 registered members of the various mutual health insurance schemes countrywide had so far benefited from the scheme since July 3, 2006" (Ghanaian Times, 22 August 2006). The report did not specify whether this was a pilot project for the rest of the country to follow suit. It did however state that the provision of referral treatment by the tertiary facilities through the NHIS was based on a Memorandum of Understanding (MOU) between Mutual Health Insurance Schemes of particular districts (Ablekuma, Ayawaso, Dangbe East, Dangbe West, Kpeshie, Ga, Tema, Ashiedu Keteke, Okai Koi and Osu Klotey) of the provincial territory of Greater Accra Region and the NHIC. It indicated that "[i]t is currently being implemented at the maternity, polyclinic, accident/casualty and the surgical-medical-emergency departments of the hospital" (Ghanaian Times, 22 August 2006).

A total of 41 per cent of the targeted people were covered under the scheme by May 2007 (Hepnet, 30 May 2007). In a parliamentary assessment of the scheme at the end of 2007, the health minister said "the total number of people who have registered under the NHIS has increased from 8.6 million to 9.6 million, representing approximately 47% of the country's total population (Ghana Parliament, 18 December 2007). Coverage varied "between 19 - 65% depending on the region" (Hepnet, 30 May 2007).

Challenges facing the scheme from the governance, organisational and management perspective include the exemption of large groups of people, a weak gatekeeper system, delays concerning the payment to providers and mistrust between providers and scheme staff. Management difficulties, a weak monitoring system and delays in ID cards production and distribution are also said to be causing hindrances (Hepnet, 30 May 2007).

From the beneficiaries' side, there are a host of problems hampering the scheme. These include various forms of abuse of the system, among them members feigning diseases to collect medicines for relatives and entire family attendance, that lead to over-utilisation of the system. Misconceptions of the process, misunderstandings of the concept, complaints about non-portability, as well as the fact that some contributors are still not registered and non-conformity to the gatekeeper system pose further challenges for the NHIS (Hepnet, 30 May 2007).

Other problems of the system include health shopping and multiple prescriptions (poly pharmacy) by patients, non-conformance to standard treatment protocols and the NHIS approved list on treatment and prescriptions, accreditation issues (few Drug stores, Private Providers and Maternity Homes have been accredited) resulting in pressure on public providers, inadequate and mal-distribution of providers, as well as inadequate distribution of health professionals to the advantage of urban dwellers (Hepnet, 30 May 2007).

5.3 Out-of-Pocket Payments

In 2005, the percentage of expenditures paid out-of-pocket⁴ in Ghana amounted to 79.1 percent of the total private expenditure on health⁵, which forms 65.9 per cent of the country's total expenditure on health (WHO, May 2008). As can be deducted from these figures, out-of-pocket payments make up approximately 50 per cent of the combined public and private expenditures on health.

The Health system of Ghana is still in a transitory process – it is being transformed from the former "cash-and-carry" to the newly implemented insurance system. The system prior to the current one was based on a full cost recovery on a pay-for-access basis. The aim of charging access fees was "to recover 15 per cent of the public sector operation cost". Though this aim was achieved, there were always difficulties as costs of illnesses vary and the majority of the people could not afford treatment. "[F]inancial access and equity" for poor people was always a problem. Though some exceptions were introduced, increasing public discontent called for its abolishment (Hepnet, 30 May 2007).

⁴ According to a definition by the WHO, out-of-pocket spending by private households includes "gratuities and payments in kind, made to health practitioners and suppliers of pharmaceuticals, therapeutic appliances and other goods and services, whose primary intent is to contribute to the restoration or to the enhancement of the health status of individuals or population groups. It includes household payments to public services, non-profit institutions and nongovernmental organizations. It includes non-reimbursable cost sharing, deductibles, co-payments and feefor–service, but excludes payments made by companies that deliver medical and paramedical benefits, whether required by law or not, to their employees. It excludes payments for overseas treatment" (WHO, 2009).

⁵ "Private expenditure on health (PvtHE) is the sum of outlays for health by private entities, such as commercial or mutual health insurance providers, non-profit institutions serving households, resident corporations and quasi-corporations not controlled by government with a health services delivery or financing, and direct household out-of-pocket payments." (WHO, 2009)

5.4 External Sources of Finance

At the inception of the health insurance scheme, nearly US\$ 5 million that came from the Heavily Indebted Poor Countries Initiative (HIPC) were used to fund the scheme at the district level (IRIN, 18 March 2004). Ghana continues to receive "general budget support for the implementation of the GPRS [Ghana Poverty Reduction Strategy] through the Multi-Donor Budgetary Support (MDBS) facility. "Some donors [have] consider[ed] shifting their support increasingly to general national budget support. The MDBS framework does not contain any conditions as to resource allocations for health, but the disbursements (from the performance tranche) depends on a set of triggers and targets including some for the health sector, which should encourage the GOG [Government of Ghana] to give sufficient priority to the health sector" (MOH, April 2005, p. 62).

6.5 Provider Payment Mechanisms

All health providers are registered companies that operate on both private and public basis. Pharmacies and hospitals wishing to operate as providers within the scheme go through basic formalities regulated by the National Health Insurance Act (No. 650, 2003). For Private Commercial Health Insurance Schemes, a feasibility study and a projection for the first two years of operation are required (NHIS, undated).

A 2007 reassessment of the progress of the National Health Insurance Scheme identified health care provider payment mechanisms as one of the areas that must be tackled in order to reform the scheme. The report, which was a result of a project undertaken under the auspices of the International Labour Organization and the World Bank, says that it was to "contribute to maintaining the NHIS's financial sustainability within a medium-term time horizon." It was to do so by "strengthening the policy design and implementation capacity of the National Health Insurance System in addressing core ongoing policy issues related to contribution collection, risk equalization and the overall provider payment mechanisms, [...] improving the purchasing functions of the NHIC, and District Mutual Health Organizations and improving the billing function of the provider network". Health Economics and Policy Network in Africa (Hepnet), also discovered that mal-distribution of provision facilities and inadequate provision facilities continue to affect the scheme (Hepnet, 30 June 2007).

6. HUMAN RESOURCES

A lingering problem in the Ghana health sector is the issue of personnel shortages. While the government is showing signs of reform, the health industry is losing personnel to higher income countries. Reports continue to show a high influx of Ghanaian health workers into western countries (MEDACT, February 2005). The organisation Physicians for Human Rights (PHR)

noted that in Africa, "health professional shortages are the most severe, by far, in rural and other poor areas" (PHR, June 2004, p. 2).

The overall ratio of medical personnel in 2006 showed one doctor per 10,000 Ghanaians and one nurse per 1,587 people. Hospital admission per 1,000 Ghanaians was 36.5 in 2005 (Hepnet, 30 May 2007).

According to Physicians for Human Rights, "the Ghana Medical Service estimates that 1,200 Ghanaian physicians are in the United States [...] Ghana currently has only about half the number of nurses it had in the mid-1980s", when its population was almost half of what it was in 2008. "In 1999 alone, 328 nurses emigrated from Ghana, approximately equivalent to the number of nurses Ghana produces annually. In 2002, along with 70 physicians and 214 nurses, Ghana lost 77 pharmacists to other countries. The retail giant Wal-Mart is reported to be recruiting pharmacists from sub-Saharan Africa and India to work in their Canadian stores" (PHR, June 2004 p. 19-21).

As a counter-strategy, the government has undertaken several efforts in increasing the wages of health workers in the country since 2006. Results of surveys in several districts in the east of the country indicated that since the increments were made, "the lowest paid public health worker now earns almost ten times the average gross national income (GNI) per capita, while the doctors earn 38.5 times GNI per capita" (Witter et al., 22 January 2007).

7. HEALTH SERVICE DELIVERY

7.1 Health Delivery Structure

Currently, the largest provider of health care services is the government, "followed [...] by the mission and then the private practitioners" (van den Boom et al., undated, p. 4). The government "[h]ealthcare facilities can be distinguished in four layers depending on the services offered at the facility: village or community health posts, district clinics, regional hospitals and the two teaching hospitals" (van den Boom et al., undated, p. 4).

The community health posts predominantly provide preventive and primary health care services, however, their curative treatment is limited due to the fact that they are mostly not staffed by doctors. Nurses and health workers provide first aid and refer cases to district hospitals, polyclinics, regional or tertiary hospitals, depending on the institution's proximity and the treatment required. Hospitals and polyclinics are the main providers of curative secondary and tertiary health care. The polyclinics also serve as first point of contact of primary health care in urban centres and therefore "provide a mixture of preventive and curative care and use the regional hospitals for referrals. The regional and the teaching hospitals are usually perceived to be the providers of higher and highest quality respectively". The community health centres "are staffed by nurses and midwifes" (van den Boom et al., undated, p. 4).

Treatment levels	Role	Type of institution	Main personnel in charge	Basis of treatment	Reim- bursements	Operators	Demo- graphics covered
Primary	Preventive, information and curative Prevention and information	Community health centre Rural health centre	Community health officers Rural health worker	First point of contact	NHIS, "Cash-and- carry" and gratuitous	Government, mission and others ⁶	Towns and surrounding areas Rural areas
Reproductive health care	Birth attendance	Maternity home	Midwives	First point of contact	"Cash-and- carry"	Government, mission and others	Rural, towns, urban and metropolitan
Secondary	Curative	District hospital	General medical personnel	First and second point of contact on referral	NHIS, "Cash-and- carry"	Government and mission	
-	Training of Health workers	Training Centre	Public health trainers	-	-	Government and Mission	Rural areas and towns
Secondary and tertiary	Curative	Regional Hospital	General medical personnel	Second and third point of contact	NHIS, "Cash-and- carry"	Government and Mission	Towns Urban and rural areas
Primary and secondary	Curative,	Polyclinic	General medical	First and second point of contact	NHIS, "Cash-and-	C	Urban and Metropolitan Centres
i i breventative i		Teaching Hospital	personnel	First, and Second point of contact or referral		Government	

Tab. 4: Level of treatment, institutions and their roles

The operation of delivery is mainly in the hands of Ghana Health Service (GHS). As a result of a government decentralised reform of the health sector, the health delivery is mainly operated at the 10 regional levels (GHS, undated-b). The regional levels offer mainly curative services, which are delivered at the regional hospitals and public health services centre of the regional hospitals by the DHMT. At the district level, curative services are provided by district hospitals. Many of these district hospitals are faith based hospitals collaborating with the government health institution for health delivery. Traditional birth attendants and traditional healers also receive recognition at the district and sub-district levels. Public health services are provided by the District Health Management Teams (DHMT) and the Public Health unit of the district hospitals (see Chapter 4.1). "At the sub-district level both preventive and curative services are provided by the health centres as well as out-reach services to the communities within their catchment areas. Basic preventive and curative services for minor ailments should be addressed at the community and household level with the introduction of the Community-based Health Planning and Services (CHPS)" (GHS, undated-e).

_

⁶ Others include NGOs, Individual philanthropies and international donors

Region	Population (percentage)	Districts	Polyclinics	Community Health Centers	District Hospitals	Tertiary Health Centres ^a	Rural Health Centres	Clinics	Doctor in Region ^b	Specialized Hospitals	Regional Hospital	Maternity Homes	Training facilities	Total Health facilities ^c
Ashanti	3, 187, 607 (17.3%)	25	2	5	20	2	1		502	5	1	103	8	530
Brong Ahafo	1,824,822 (9.9%)	19							86					220
Central	1,580,047 (8.6%)	13	1	45	10	2 ^d	20 ^e		76	1	1	19	3	158
Eastern	2,108,852 (11.5%)	8	44 ^f	16	5		4		127		1	9		132
Greater Accra	2,909,643 (15.8%)								1238					
Northern	1,854,994 (10.1%)	21	1	93	14	1			33	2	1	6		168
Upper East	917,251 (5%)	8		30	5			47	37			2	4	174
Upper West	573,860 (3.1)	8		88	6			12	15		2	6	3	154
Volta	1,612,299 (8.8%)	4		41	3			9	91		1	6		60
Western	1,842,878 (10%)	12							99					261

Total population: 18,412,247 (Ghana Home Page, undated). Source: Ghana Health Service (GHS) unless indicated otherwise.

Tab. 5: Number and percentage of population in each region of Ghana (data from 2000) with the type and number of health care facility available in each region.

Traditionally, the health centres have been "the first point of contact between the formal health delivery system and the client. It is headed by a Medical Assistant and staffed with program heads in the areas of midwifery, laboratory services, public health, environmental, and nutrition." Each health centre is meant to "serve [...] a population of approximately 20,000. They provide basic curative and preventive medicine for adults and children as well as reproductive health services." They should also be equipped to "provide minor surgical services such as incision and drainage. They augment their service coverage with outreach services. [...] [S]evere and complicated conditions" should be referred to appropriate higher levels. For the urban centres, polyclinics serve as the equivalent of rural health centres. "Polyclinics are usually larger, offer a more comprehensive array of services, are manned by physicians, and can offer complicated surgical services. They are mainly in metropolitan areas" (GHS, undated-e)

^a Including major hospitals and/or teaching hospitals

^b GMA, undated

^c Total health facilities include private hospitals, mission hospital and other forms service centres, exclusively operated maternity homes and mobile community-based Health Planning Service (CHPS)

^d Not quite up to Tertiary Facilities

^e CHPS-Community Health Planning Services

^f These facilities are equipped to higher standards than polyclinics, but to a slightly lower standard than specialised hospitals and teaching hospitals.

Amid efforts to strengthen the delivery of health in Ghana, "the director-general of Ghana Health Services [...] candidly admits that the country has achieved "mixed success" in its bid to ensure health for all Ghanaians" (VOA, 28 February 2007). According to an IRIN report, Ghana's biggest tertiary facility for teaching and referral, Korle Bu Hospital, "is falling apart". Once West Africa's most prestigious facility, it is now only a symbol of "poor service" with "high costs" (IRIN, 16 November 2006).

7.2 Primary Health Care

Primary health care in Ghana is structured to serve the rural and urban population according to priority. The rural areas which are mostly deprived of permanent health infrastructures have been prioritised with programmes such as the Community Health Planning Service (CHPS), which aims to "transform [...] clinic- based primary health care and reproductive health services to community-based health services". Most CHPS workers are mobile and move from community to community to educate community members on preventive practices as well as administer curative services (Ghana CHPS, 2009a). Ghana has embarked on training health workers especially for the need of rural areas. The Kintampo Rural Health Training School (KRHTS), situated in the middle of the rainforest region of Brong Ahafo, Navrongo Health Research Centre (NHRC) situated farther in the north-east of the country, and others of their kind in other regions of the country train community health workers, nurses and health administrators for deployment into rural areas (Ghana CHPS, 2009a; Ghana CHPS, 2009b).

7.3 Secondary/Tertiary Care

Secondary and tertiary care are classified as purely curative and offer a range of hospital services, depending on the defined status of the institutions. The secondary and tertiary health care level is sub-divided into several different categories depending on their range of service. A teaching hospital, for example, takes both referral cases and serves as a first point of contact. The military and police hospitals of Ghana serve as tertiary healthcare infrastructures, serving both as first point of contact and referral institutions but do not serve as teaching hospitals. Secondary and tertiary health care delivery in Ghana is mostly an income generating area of health. Most of the services in these institutions are available at the cost of patients only. These tertiary institutions also operate on private bases as profit making institutions by offering curative services to non-insured people on a cash-and-carry basis.

_

⁷ see map of districts covered at Ghana CHPS, CHPS coverage, 2008

8. PHARMACEUTICALS - Availability and Affordability

In a policy paper published in 2004, the MOH stated that its "main challenge" was the financing of its comprehensive drug policy. The paper stressed that "economic difficulties have compelled the introduction of user charges in recent years. [...] The drug policy has up to date been unable to address abuses and problems associated with government suggested exemptions for specified groups of people who are considered incapable of paying for drugs at public health institutions." (MOH, July 2004)

A typical example is the case of Ghana's "number one" killer disease, malaria (IRIN, 11 August 2008). When the country switched from chloroquine to artesunate-amodiaquine as the first line treatment in 2005, the issue of procuring the latter to reach poor people was raised (artesunate-amodiaquine is to cost US \$1.30 compared to the previous US \$ 0,10 cost of treatment for Chloroquine). National Drug Programme Manager Martha Gyansa-Lutterodt, admitted that "essential medicines prescribed by the new treatment guidelines would account for 'a huge chunk' of the 2005 health budget" (IRIN, 17 January 2005).

An external assessment for the MOH revealed that "procurement systems are well established in the sector. However, there is a general absence of basic equipment to allow for daily quality service delivery in health centres and hospitals (weighing scales, delivery kits, resuscitation equipment, thermometers, BP apparatus etc)" (MOH, April 2005). However, a WHO supported initiative aims to ensure an adaequate supply of community health centres with pharmaceuticals: "With the implementation of GEMI [Ghana Essential Medicines Initiative], CHPS nurses and community health compounds in the experimental communities will have access to vital drugs listed on WHO's Essential Medicines List" (PC, 27 April 2007). WHO also supports "the Ministry of Health and other key stakeholders in the pharmaceutical sector (including traditional medicine) to develop, implement and monitor national drug policies and improve access to essential medicines for priority diseases such as HIV/AIDS, TB and Malaria" (WHO, undated).

A comparative study of medical procurement by the MOH and the faith-based health sector measured "[a]ffordability [...] by the cost of treatment and medicine in relation to the income of the lowest paid government worker." "According to the Ghana universal salary structure effective since 1 July 2004, the lowest paid government worker earned 9,348.30 Ghanaian Cedis, or slightly over US\$ 1 per day." The study analysed the prices of artesunate and amodiaquine and showed that it would take approximately four wage days for a person to purchase medicines from the private sector and almost three from the mission sector for this malaria treatment. Analysing 39 commonly used drugs, the study also found out that beside many complications such as change of prices with change of deliverer, both government and missions often had to buy at more than double the market procurement prices (MOH, undated, p. 18ff).

The government programme of Work for 2007 stated that "availability of logistics and supplies including essential medicines and health facilities has been improving. [...] Investments have been made in the procurement management capabilities in all BMCs [Budget Management Centres]. There have been improvements in the quality of goods supplied and malpractice has been reduced. However, the procurement, stores management and distribution systems need modernization and re-engineering. Other key issues that have confronted drug supply management include rational use, financing and the assurance of drugs quality" (MOH, 2007, p. 30). It continued to say that "[t]here is still no systematic approach to pricing at health facility level which currently differs from one region to another. The poor functioning of CMS [Central Medial Stores] has led to shortages of essential drugs and supplies and is further compounded by non patronage by health facilities leading to wastages" (MOH, 2007, p. 30). Other challenges remain the indebtedness of regional medical stores to central stores. All of this requires, according to the government programme, "immediate interventions to increase availability of health commodities at the CMS" (MOH, 2007, p. 24).

A further "common complaint is that the dispensaries and local pharmacies designated to supply drugs to people covered by the insurance scheme are also turning patients away, either because the drugs are not available or are not covered by the plan. 'If the drugs are not on the list of the National Health Insurance Scheme, we cannot supply them,' Anim Kwakye, a pharmacist accredited by the NHIS plan said. He added that "even if the drugs are on the list, [...] delays in payments by the insurance company are making him unwilling to participate. ,We send claims to the scheme and they are supposed to reimburse us two weeks after we present our claims and documents to support it. But often it takes a long time for them to reimburse us. That's a major problem'" (IRIN, 21 September 2006).

Meanwhile, there exists a longstanding tradition of sales of pharmaceuticals by Licensed Chemical Sellers (LCS). The LCSs most often serve as the first point of contact for patients. They are often drugstores that are "stocked with the most common over the counter medications." These LCSs do not always comfort to the laid-out structure and they are not regulated to adhere to the quality, accessibility and affordability that patients require, especially in rural areas. While "LCS lack standardization", they play a vital role in the provision of essential prescription-free medicine. However, with LCS not or seldom having any medical training, customers may not receive the right medicine or the counseling they need on how to take their medicine (WRI, March 2008).

9. ABBREVIATIONS

ACCP	Alliance for Cervical Cancer Prevention	IAEA	International Atomic Energy Agency
ACT	Artemisinin-based Combination	IDF	International Diabetes
	Therapy		Federation
ANC	Anti Natal Care	ILO	International Labour
CHA	Christian Health Association of		Organization
	Ghana	IRIN	Integrated Regional
CHPS	Community-based Health		Information Network
	Planning Service	KATH	Konfo Anokye Teaching
CHRAJ	Commission on Human Rights		Hospital
	and Administrative Justice	KBTH	Korle-Bu Teaching Hospital
CPN	Community Psychiatric Nurses	MOH	Ministry of Health
CVD	Cardiovascular Diseases	NCRNM	National Centre for
DHMT	District Health Management		Radiotherapy and Nuclear
	Team		Medicine, Ghana
FGM	Female Genital Mutilation	NHIC	National Health Insurance
GEMI	Ghana Essential Medicines		Council
	Initiative	NHIS	National Health Insurance
GEMI	Ghana Essential Medicines		Scheme
	Initiative	NPHS	Northern Presbytery Health
GHS	Ghana Health Service		Services
GHSC	Ghana Health Service Council	RHA	Regional Health Administration
GHBF	Ghana Hepatitis B Foundation	SVA	Single Visit Approach
GNA	Ghana News Agency	TBA	Traditional Birth Attendants
GOG	Government of Ghana	TI	Transparency International
GPA	Ghana Psychiatry Association	WHO	World Health Organisation
HIPIC	Heavily Indebted Poor		
	Countries Index		

10. REFERENCES

- Abor, P. A; Abekah-Nkrumah, G; Abor, J: An Examination of Hospital Governance in Ghana.
 In: Leadership in Health Services Vol. 21 Issue 1, 2008, 47-60 (published on essa.org.za)
 http://www.essa.org.za/download/2007conference/Abor;Abekah-Nkrumah&Abor.pdf
 (accessed 19 January 2009)
- Adams, Isaac/Darko, Daniel/Accorsi, Sandro: Malaria A Burden Explored. In: Bulletin of Health Information 1 (1), October 2004
 http://www.ghanahealthservice.org/includes/upload/publications/Malaria%20A%20Burden%20Explored.pdf (accessed 17 August 2008)
- Asante, Augustine D./Zwi, Anthony B./Ho, Maria T.: Getting by on credit: how district health managers in Ghana cope with the untimely release of funds. In: BMC Health Services Research, Vol. 6.105, 17 August 2006
 http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=1563463 (accessed 15 September 2008)
- Asenso, Okyere: Financing health care in Ghana. In: World Health Forum 16.1, 1995, p. 86-91
 - http://www.ncbi.nlm.nih.gov/pubmed/7873037 (accessed 17 August 2008)
- BBC World News: Africa's looming cancer epidemic, 12 June 2008
 http://news.bbc.co.uk/2/hi/programmes/from_our_own_correspondent/7450064.stm
 (accessed 14 August)
- CIA Central Intelligence Agency: The World Factbook Ghana, 5 March 2009 https://www.cia.gov/library/publications/the-world-factbook/geos/gh.html
- Department of Social and Developmental Psychology, University of Cambridge (Author: Ama de-Graft Aikins): Healer shopping in Africa: New evidence from rural-urban qualitative study of Ghanaian diabetes experiences, 1 October 2005 http://www.bmj.com/cgi/content/full/331/7519/737 (accessed 14 August 2008)
- CBC The Canadian Broadcasting Corporation: Health insurance a lifesaver in Ghana, 23
 June 2005
 - http://www.cbc.ca/news/viewpoint/vp_ross/20050623.html (accessed 11 August 2008)
- CHAG Christian Health Association of Ghana, May 2006
 http://www.chagghana.org/docs/CHAGAREPORTMAYJUNE2006.pdf (accessed 10 September 2008)
- Daily Graphic: Improve Our Conditions to Attract Young midwives, 15 November 2007 (published on myjoyonline.com)
 - http://www.myjoyonline.com/health/200711/10467.asp (accessed 18 August 2008)
- EPN Ecumenical Pharmaceutical Network: Ghana Baseline Survey, undated http://www.epnetwork.org/fr/access/research/ghana (accessed 5 September 2008)
- GEPC Ghana Export Promotion Council: Managing Ghana's Export for Development: Presentation of Ghana Export Promotion Council at the Ghana Investment Forum, 23 May 2007
 - http://www.gipc.org.gh/Userfiles/File/Events/IPA GEPC.pdf (accessed 6 October 2008)

- Ghana CHPS Ghana Community-based Health Planning and Services About, 2009a http://ghanachps.org/?page_id=7 (accessed 16 January 2009)
- Ghana CHPS Ghana Community-based Health Planning and Services: CHPS coverage, 2009b
 - http://ghanachps.org/?page_id=15 (accessed 16 January 2009)
- Ghana Home Page: Population, undated http://www.ghanaweb.com/GhanaHomePage/geography/population.php (accessed 31 July 2008)
- Ghana Parliament: 176 Projects Completed Within Five Years, 18 December 2007
 http://www.parliament.gh/176_health_project_completed_within_five_years.html (accessed 9 October 2008)
- Ghana Statistical Service: Key Social, Economic and Demographic Indicators, 2007 http://www.statsghana.gov.gh/KeySocial.html (accessed 23 September 2008)
- Ghanaian Chronicle: Ghana; Corruption Rife in Health Sector- Gll Report 2 February 2006 (published by Transparency International)
 www.transparency.org/content/download/4912/28857/file/Ghanaian_Chronicle_06-02-02.pdf
 (accessed 10 August 2008)
- Ghanaian Chronicle: Ghana: Region Records 1,761 New Cases of TB in 2007, 29 April 2008 (published on allAfrica.com)
 http://allafrica.com/stories/200804291067.html (accessed 3 September 2008)
- Ghanaian Chronicle: Ghana: Chemical Sellers Have Legitimate Point, 30 July 2008 (published on allAfrica.com)
 - http://allafrica.com/stories/200807300824.html (accessed 4 September 2008)
- Ghanaian Chronicle: Ghana: Maternal Deaths And the Society, 6 August 2008 (published on allAfrica.com)
 - http://allafrica.com/stories/200808061016.html (accessed 7 January 2009)
- Ghanaian Chronicle: Ghana: Lack of Adequate Toilet Facilities, Threat to Public Health, 21
 August 2008 (published on allAfrica.com)
 http://allafrica.com/stories/200808220586.html (accessed 8 September 2008)
- Ghanaian Times: NHIS Must Cover Hepatitis B-Doc, 6 October 2007
 http://www.newtimesonline.com/content/view/11653/57/ (accessed 8 October 2008)
- Ghana Today: Economy strong but vulnerable ISSER, 2 September 2008
 http://www.ghanatoday.com/index.php?option=news&task=viewarticle&sid=24273
 (accessed 5 January 2009)
- GHBF Ghana Hepatitis B Foundation: About us, 2008
 http://hepatitisbghana.org/aboutus/ (accessed 5 September 2008)

- GHS Ghana Health Service: Organisational Structure, undated-b http://www.ghanahealthservice.org/aboutus.php?inf=Organisational%20Structure (accessed 3 September 2008)
- GHS Ghana Health Service: Organogram, undated-c http://www.ghanahealthservice.org/ghs organogram.pdf (accessed 7 January 2009)
- GHS Ghana Health Service: Ghana Health Service Council, undated-d http://www.ghanahealthservice.org/ghscouncil.php (accessed 7 January 2008)
- GHS Ghana Health Service: About us Regional and District Administration, undated-e http://www.ghanahealthservice.org/aboutus.php?inf=Regional%20and%20District%20Administration (accessed 7 January 2008)
- GHS Ghana Health Service: Objects and Functions of the Health Service Council, undated-f
 - http://www.ghanahealthservice.org/about_programmes.php (accessed 29 September 2008)
- GMA Ghana Medical Association: List of doctors, undated http://www.ghanamedassn.org/downloads.htm (accessed 31 July 2008)
- GNA Ghana News Agency: Health insurance is the only option to quality health care, 22
 June 2005 (published on Ghana Home Page)
 http://www.ghanaweb.com/GhanaHomePage/NewsArchive/artikel.php?ID=84222 (accessed 13 August 2008)
- GNA Ghana News Agency: Some members of Kpale Faith Church now attend hospital, 1
 June 2008 (published on Ghana Home Page)
 http://www.ghanaweb.com/GhanaHomePage/NewsArchive/artikel.php?ID=144688
 (accessed 8 January 2009)
- GNA Ghana News Agency: Ahmadiyyah Muslim Mission Organises Free Medical Camp, 14
 July 2008 (published on Qadiyan.com)
 http://www.qadiyan.com/2008/07/ahmadiyya-musli.html (accessed 8 October 2008)
- GNA Ghana News Agency: Declare Tuberculosis an emergency disease in Ghana, 4
 August 2008 (published on myjoyonline.com)
 http://news.myjoyonline.com/health/200808/18978.asp (accessed on 5 January 2009)
- Hepnet Health Economics and Policy Network in Africa: The Inplementation of the National Health Insurance Scheme (NHIS) Ghana: Experience Sharing, 30 May 2007
 http://www.hepnet.info/downloads/Ghana1.ppt (accessed on 4 September 2008)
- HMN Health Metric Network: Ghana health information system: Profile and summary preliminary assessment, April 2005
 - http://www.moh-ghana.org/moh/docs/hmn_act/Health%20Information%20System%20Profile%20Ghana_summary_2%5B1%5D.doc (accessed 4 September 2008)
- HRU Health Research Unit: Report on The perception and demand for mutual Health Insurance in the Kassena-Nankana district of Northern Ghana, May 2005a
 http://www.hru-ghs.org/Newsletter.pdf (accessed 1 August 2008)
- HRU Health Research Unit: Treatment Default Among Adult TB Patients Registered At The
 Effia-Nkwanta regional Hospital: What Are The Contributing Factors?, May 2005b
 http://www.hru-ghs.org/Newsletter.pdf (accessed on 8 January 2009)
- IAEA- International Atomic Energy Agency: IAEA News Centre: IAEA Chief to Talk Cancer,
 Crops, Nutrition on Africa Visit, IAEA Director General visits Nigeria & Ghana, 17-22

- January 2005 (Staff Report), 17 January 2005 http://www.iaea.org/NewsCenter/News/2005/dg_ghana_nigeria.html (accessed 13 August 2008)
- ICRO Islamic Culture and Relation Organisation: Iran Clinic Offer Healthcare, 18 May 2007
 - http://accra.icro.ir/?c=newsShow&NewsId=479632&t=4 (accessed 8 October 2008)
- ILO International Labour Organization: Decent Work Pilot Programme (DWPP), 5 May 2006
 - http://www.ilo.org/public/english/bureau/dwpp/countries/ghana/index.htm (accessed 4 September 2008)
- IRIN Integrated Regional Information Network: Ghana: National health insurance scheme launched, 18 March 2004
 - http://www.irinnews.org/report.aspx?reportid=49172 (accessed 13 August 2008)
- IRIN Integrated Regional Information Network: New malaria drugs and expansion of ARV treatment push up government drugs bill, 17 January 2005
 http://www.irinnews.org/report.aspx?reportid=52702 (accessed 17 August 2008)
- IRIN Integrated Regional Information Network: Ghana: Quality healthcare still a dream,
 21 September 2006
 - http://www.irinnews.org/Report.aspx?ReportId=61148 (accessed 30 July 2008)
- IRIN Integrated Regional Network Information: Ghana: Hospital Symbolic of ill who visit,
 16 November 2006
 - http://www.irinnews.org/report.aspx?reportid=61585 (accessed 23 September 2008)
- IRIN Integrated Regional Information Network: GHANA: Safe abortion services virtually non-existent despite 1985 law, 12 October 2007
 - http://www.irinnews.org/report.aspx?ReportId=74774 (accessed 4 August 2008)
- IRIN- Integrated Regional Information Network: Ghana: Dumping Grounds for Used Gadgets, 22 July 2008
 - http://www.irinnews.org/Report.aspx?ReportId=79371 (accessed 2 September 2008)
- IRIN Integrated Regional Information Network: Ghana: Race Against Time To Cut Maternal Mortality, 5 August 2008
 - http://www.irinnews.org/report.aspx?ReportID=79645 (accessed 8 September 2008)
- IRIN Integrated Regional Information Network: In-Depth: Killer Number One: The fight against malaria, 11 August 2008
 - http://www.irinnews.org/lnDepthMain.aspx?lnDepthId=10&ReportId=57929&Country=Yes (accessed 1 Aug 2008)
- MEDACT: The 'Skills Drain' of Health Professionals from the Developing World: a Framework for Policy Formulation, February 2005
 http://www.medact.org/content/Skills%20drain/Mensah%20et%20al.%202005.pdf (accessed 30 August 2008)
- Modern Ghana: Maternal Deaths and the Ghanaian Society... An alarming everyday issue yet to be conquered, 7 August 2008
 - http://www.modernghana.com/lifestyle/416/16/maternal-deaths-and-the-ghanaian-society-an-alarmi.html (accessed 24 September 2008)

- MOH Ministry of Health, Ghana: National Drug Policy, July 2004
 http://www.who.int/countries/gha/publications/Ghana_National_DrugPolicy_2nd_Edition.pdf
 (accessed 15 September 2008)
- MOH Ministry of Health, Ghana: Review POW 2004 Ministry of Health Ghana. Report of the External Review Team, April 2005
 http://www.ghanaqhp.org/fileadmin/user_upload/QHP/2004_MOH_External_Review_Report.pdf (accessed 15 September 2008)
- MOH Ministry of Health Programme of Work: The Ghana Health Sector annual programme of work, 2007
 http://www.moh-ghana.org/moh/docs/programs_of_work/pows/AnnualProgrammeofWork2007.pdf (accessed 16 September 2008)
- MOH Ministry of Health, Ghana: Legal and Policy Framework For Health Information and Health Data Reporting (Draft), March 2008
 http://www.moh-ghana.org/moh/docs/policies/health%20information%20policy/PolicyandLegalFrameworkforHMIS.pdf (accessed 12 September 2008)
- MOH Ministry of Health, Ghana: Medicine Prices in Ghana: A comparative study of Public,
 Private and Mission sector medicine Prices, undated
 http://www.afro.who.int/dsd/survey_reports/ghana.pdf (accessed 18 August 2008)
- Morrow, R. H./Sai, F.T./Barker, L.F.: Australia Antigen and Hepatitis in Accra, Ghana. In:
 British Medical Journal Vol. 13.4, November 1971, p. 389-391 (veröffentlicht auf Pubmed)
 http://www.pubmedcentral.nih.gov/pagerender.fcgi?artid=1799482&pageindex=1 (accessed 8 October 2008)
- NCRNM National Centre for Radiotherapy and Nuclear Medicine (Baffour Awuah):
 Radiotherapy and palliation, 2004 (published on www.cancerworld.org)
 http://www.p.org/CancerWorld/moduleStaticPage.aspx?id=671&id_sito=6&id_stato=1
 (accessed 30 July 2008)
- NHIS National Health Insurance Scheme, Ghana: Scheme Registration and Licensing procedure, undated
 http://www.nhis.gov.gh/?CategoryID=226&ArticleID=1022&SearchParam (accessed 9 October 2008)
- PC Population Council: The Population Council, the Ghana Community-based Health
 Planning and Services Initiative, and the Ghana Essential Medicines Initiative, 27 April 2007
 http://www.popcouncil.org/mediacenter/DMK_Ghana_more_info.html (accessed 3 April 2008)
- PHR Physicians for Human Rights Action Plan to Prevent Brain Drain: Building Equitable
 Health System in Africa, June 2004
 http://physiciansforhumanrights.org/library/documents/reports/report-2004-july.pdf
 (accessed 11 August 2008)
- Public Agenda: Mental Illness Not Given the Attention It Deserves-Report, 7 April 2006 (published on allAfrica.com)
 - http://allafrica.com/stories/printable/200604100452.html (accessed 18 August 2008)
- Public Agenda: Ghana: Over 3.2 Million People Die of Diabetes Every Year, 1 November 2007 (published on allAfrica.com)
 http://allafrica.com/stories/200711020774.html (accessed 7 October 2008)

- Public Agenda Why Neglect Primary Health Care? 6 February 2008 (published on allAfrica.com)
 - http://allafrica.com/stories/200802060466.html (accessed 16 September 2008)
- Public Agenda: Ghana: Unicef Stresses Importance of Investing in Maternal Health, 10 March 2008 (published on allAfrica.com)
 - http://allafrica.com/stories/200803101550.html (accessed 29 September 2008)
- Public Agenda: Ghana: Country Needs a Mental Health Law Urgently, 15 August 2008 (published on allAfrica.com)
 - http://allafrica.com/stories/200808181038.html (accessed 4 September 2008)
- Public Agenda: Ghana: NHIS Reeling Under Sanitation-Related Diseases, 1 September 2008 (published on allAfrica.com)
 - http://allafrica.com/stories/200809011434.html (accessed 29 September 2008)
- Republic of Ghana: The Constitution of the Republic of Ghana 1992, Chapter 006 http://judicial.gov.gh/constitution/chapter/chap_6.htm (accessed 7 January 2009)
- Republic of Ghana: National Health Insurance Act, 2003
 http://www.nhis.gov.gh/_Uploads/dbsAttachedFiles/Act650original2.pdf (accessed 15 September 2008)
- SciDevNet Science and Development Network: Room for traditional medicine in Ghana? 16 May 2007
 - http://www.scidev.net/en/agriculture-and-environment/opinions/room-for-traditional-medicine-in-ghana.html (accessed 14 August 2008)
- The Statesman: Winning the war against Guinea Worm under the MDGs: A myth or reality? 26 January 2008
 http://www.thestatesmanonline.com/pages/news_detail.php?newsid=5634§ion=7
 (accessed 10 August 2008)
- UN Department of Peacekeeping/ Cartographic Section: Ghana, February 2006
 http://www.un.org/Depts/Cartographic/map/profile/ghana.pdf (accessed 10 February 2009)
- US Census Bureau: International Data Base (IDB): Country Summary Ghana, 2008
 http://www.census.gov/ipc/www/idb/country/ghportal.html (accessed 10 September 2008)
- Van den Boom, G.J.M; Nsowah-Nuamah, N.N.N.; Overbosch, G.B: Healthcare Provision and Self-medication in Ghana, October 2004 (accessed via Web Archive) http://web.archive.org/web/20070625163825/http://www.saga.cornell.edu/images/vandenboom.pdf (accessed 30 August 2008)
- Van den Boom, G.J.M; Nsowah-Nuamah, N.N. N; Overbosch, G. B. Curative Health Care Utilization in Ghana: A multinomial analysis of equitable access opportunities, undated http://www.agricta.org/partners/sadaoc/Francais/N%B052.pdf (accessed 12 January 2008)
- VOA Voice of America: Ghana Working to Expand AIDS Treatment, 16 August 2006
 http://www.voanews.com/english/archive/2006-08/2006-08-16-voa39.cfm (accessed 18 August 2008)
- VOA Voice of America: Ghanaian Health Official Laments Slow Progress in Providing Universal Health Care, 28 February 2007
 http://www.voanews.com/english/archive/2007-02/2007-02-28-voa28.cfm (accessed 22 September 2008)

- WHO World Health Organization: The role of the pharmacist in self-care and self-medication, 1998 (published in WHO medicines bookshelf 1.0)
 - http://nzdl.sadl.uleth.ca/cgi-bin/library?e=d-00000-00--off-0whoedm--00-0-10-0---0-prompt-10--4------0-11-11-en-50---20-about---00-0-11-1-0utfZz-8-008a=d8cl=CL1.18d=HASH01o48452db985e8c8ed8378d.67
- WHO World Health Organization: Traditional Medicine, May 2003
 http://www.who.int/mediacentre/factsheets/2003/fs134/en/ (accessed 8 January 2009)
- WHO World Health Organization: Cardiovascular Diseases in the African Region: Current Situation and Perspectives, 17 June 2005
 http://www.afro.who.int/rc55/documents/afr_rc55_12_cardiovascular.pdf (accessed 7 January 2009)
- WHO World Health Organization: Ghana Revives its Mental Health Law, 2006
 http://www.who.int/countries/gha/news/2006/menatlhealthlaw/en/index.html (accessed 8 October 2008)
- WHO World Health Organization: The New Anti Malaria Drug Policy For Ghana, 13 March 2006
 http://www.who.int/countries/gha/news/2006/anti.malaria.drug.policy/en/ (accessed 1 August 2008)
- WHO World Health Organization: Mental Health: Ghana, 2008
 http://www.who.int/mental_health/policy/country/ghana/en/index.html (accessed 18 August 2008)
- WHO World Health Organization: Core Health Indicators: The latest data from multiple WHO sources, May 2008
 http://www.who.int/whosis/database/core/core_select_process.cfm (accessed 5 September 2008)
- WHO World Health Organization: WHO Statistical Information System (WHOSIS) –
 National health accounts, 2009
 http://www.who.int/whosis/indicators/compendium/2008/3exo/en/ (accessed 4 February 2009)
- WHO World Health Organization: EDM- Essential Drug & Medicine, undated http://www.who.int/countries/gha/areas/essential_drug_and_medicine/en/index.html (accessed 12 August 2008)
- Witter, Sophie/Kusi, Anthony/Aikins, Moses: Working practices and incomes of health workers: evidence from an evaluation of a delivery fee exemption scheme in Ghana. In: HRH
 Human Resource for Health 5.2, 2007, 22 January 2007
 http://www.human-resources-health.com/content/5/1/2 (accessed 15 September 2008)
- Witter, Sophie: Removal of childbirth delivery fees: The impact on health workers in Ghana.
 In: ID21 health highlights, March 2008
 http://www.id21.org/publications/health%20workforce.pdf (accessed 14 September 2008)
- WRI World Resource Institute: Improving access to essential drugs through conversion Franchising, March 2008
 http://pdf.wri.org/whatworks_careshop_ghana.pdf (accessed 6 October 2008)