HUMAN RESOURCE POLICIES AND STRATEGIES FOR THE HEALTH SECTOR 2007-2011

MINISTRY OF HEALTH

REPUBLIC OF GHANA

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Abbreviations and Acronyms

A&E	Accident and emergency
ADHA	Additional duty hour allowance
ANC	Antenatal care
ART	Antiretroviral Therapy
CHAG	Christian Health Association of Ghana
CHN	Community health nurse
CHPS	Community-Based Health and Planning Services
CMR	Child mortality rate
COHO	Community oral health officer
DA	District Assembly
DAI	Deprived Area Incentive
DANIDA	Danish International Development Agency
EHA	Environmental Health Assistant
EN	Enrolled Nurse
ENT	Ear, nose and throat
EXP	Expatriates
GCPS	Ghana College of Physicians and Surgeons
GHS	Ghana Health Service
GMHI	Ghana Macroeconomics and Health Initiative
GPRS	Ghana Poverty Reduction Strategy
GRMA	Ghana Registered Midwives' Association
HIPC	Highly indebted poor country
HIS	Health information system
HIST	Health In-service training
HQ	Headquarters
HRD	Human resource development
HRDD	Human Resource Development Directorate
HRH	Human resources for health
HRHD	Human Resource for Health Development
HRI	Human Resource Information
HRM	Human resource management
HTI	Health training institutions
IMCI	Integrated management of childhood illnesses
IOM	International Organization on Migration
IPPD	Integrated Personnel Payroll Database
IPT	Intermittent preventive treatment
ITN	Insecticide treated net
JICA	Japanese International Cooperation Agency
KATH	Komfo Anokye Teaching Hospital
KBTH	Korle Bu Teaching Hospital
KNUST	Kwame Nkrumah University of Science and Technology
MDAs	Ministries, departments and agencies
MDGs	Millennium Development Goals
MIDA	Migration for International Development Agency
MLGRD	Ministry of Local Government and Rural Development
MOH	Ministry of Health
NAS	National Ambulance Service
NICU	Neonatal Intensive Care Unit
NTC	Nurses' training colleges
O&G	Obstetrics and Gynecology
OB/GYN	Obstetrician/gynecologist

OP TH	Operating theatre
OPD	Out-patient Department
PH	Public health
PHN	Public health nurse
PPME	Policy, Planning, Monitoring & Evaluation
PLWHA	People living with HIV/AIDS
QHP	Quality Health Partners
RDHS	Regional Director of Health Services
RHTS	Rural health training school
SPMDP	Survey of Private Medical and Dental Practitioners
SSS	Senior Secondary School
TAMPD	Traditional and Alternative Medicine Practice Directorate
TBA	Traditional birth attendant
TO	Technical officer
TOT	Training of trainers
TT	Tetanol
UGMS	University of Ghana Medical School
WHO AFRO	World Health Organization – Regional Office for Africa

Preface

Health has been an underlying priority in the Government's overall strategy for accelerated growth in the country. The Government is committed to improving the health status of all Ghanaians.

Among the many resources to be mobilized to this end are human resources. Human resource development has in the past received some attention though inadequate. In 2002, the Ministry of Health (MOH) developed a five-year (2002-2006) policy and strategy document, Human Resources for the Health, to serve as a guide to implementing agencies, both public and private. Unfortunately, the strategies outlined in that document were not fully implemented, creating significant gaps in human resource management in the health sector.

The MOH and its agencies have realized the need to review the Human Resources for the Health 2002-2006 policy strategy to address the existing human resource gaps as well as the current challenges facing the sector.

Today, we stand on the threshold of significant national development. It has become even more critical that we undertake a complete shift of paradigm in our health goals and policies to strategies that will ensure wealth creation for the nation. This will require harmonization of national health policies with the development of human resources for health in both public and private sectors.

This policy document outlines the position of the MOH Human Resources by providing a basis for decision making regarding planning, training, recruitment, deployment and management. The policies enshrined in this document provide the framework for negotiations on adequate resource allocation for effective human resources for health service delivery in Ghana.

This policy and strategic document is an essential reference for:

- policy makers, planners, and managers of the health sector;
- civil society organizations engaged in health; and
- private and public health care providers and implementing agencies.

It provides stakeholders with information about human resource goals, the human resource situation, and projections for the health sector. The document looks at the human resource policies and strategies and human resource financing for the next five years.

Finally, what will make this document unique is the commitment on the part of all stakeholders to its implementation.

Maj. Courage E.K. Quashigah (Retired)
Minister of Health
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Executive Summary

For the past five years, the health sector has made considerable effort to implement many policies and strategies on human resources for health (HRH) within the context of health reforms, with varied success. As a result, there exist human resource gaps in the health sector. This document presents the current HRH situation for Ghana, including the main challenges, and reviews the existing policies and strategies. It then sets out to address those gaps.

The introduction provides the health workforce direction for the short to medium term built around the conceptual framework of national development goals and the policy direction of the MOH. It provides the HRH vision and objectives for the next five years. The chapter also outlines the methodology used in the design of the document.

The second chapter presents the current HRH situation. This part presents the projected population and available health facilities in Ghana. Currently there are approximately 69,000 people involved in health care delivery. Out of this number only 52,200 are formally known and recognized. Of this, the MOH employs about 42,300. The staff includes:

- 2,026 medical officers;
- 1,550 pharmacists;
- 31 dental surgeons;
- 7,304 general professional nurses;
- 2,956 enrolled nurses;
- 3,246 community health nurses;
- 2,810 nurse midwives;
- 588 allied health professionals; and
- 27,918 non-clinical and clinical support staff.

The situation indicates a sector with very weak mid-level personnel staffing, excessive support staff, an inadequate staff mix and imbalances in health workforce distribution, and weak institutional capacities for human resource information, supervision and monitoring. This section also reveals the increasing cost in human resource financing. It briefly outlines the main human resource challenges for the health sector.

The third chapter presents the projected health sector goals. It provides current as well as the projected human resource requirements, standards and vacancies for the next five years of the key health sector workforce. This chapter also presents the training projections indicating anticipated inputs, dropouts and outputs. It then links requirements to training projections and identifies gaps to be filled.

Chapter four is on the HRH policies and strategies. It examines HRH issues and identifies key policy questions. The policies are developed into a model on HRH planning, HRH development and HRH management, all of which lead to better outcomes in areas like health workforce availability, enhanced competencies and increased productivity. The chapter then presents the HRH policies and strategies that are expected to address the current HRH issues in Ghana.

Finally, the last section presents the five-year, short- to medium-term implementation framework, taking into consideration critical success factors. The plan provides the key results areas, programs, and time frames for the broad program areas. Annexes are provided as references. The document has been produced in abridged form for easy reading.

Introduction

Over the last ten years the health sector has made several attempts to transform its human resources management schemes in order to strengthen and empower workers with relevant skills so to provide quality health care to the people of Ghana. The human resource policy direction in the last five years has focused on increasing production and retention of staff, and equipping them with the relevant tools to provide health care to all Ghanaians. The current reforms in the health sector demand additional policy interventions on human resource management (HRM) for sustainable human resource development towards improved health care delivery. The policies enshrined in this document are derived from a conceptual framework on global health workforce issues, national development goals, and the next five-year policy direction of the MOH.

Global Health Workforce

There is a chronic shortage of well-trained health workers globally. This shortage is due to:

- migration to well-developed countries;
- a non-propagating health workforce;
- poor staff retention mechanisms in less developed countries, including poor salaries and benefits;
- illness and death; and
- other uncontrollable factors, e.g. spouses joining their partners.

The WHO estimates the current full-time health workforce to be 59.2 million. Out of this, health service providers constitute about two-thirds, while the remaining third comprises health management and support staff. The global trend of a migrating health workforce and the improved economies of certain countries influence Ghana's HRM policy direction over the next five years. (World Health Report, 2006)

National Development Goals

The national development goals are derived from the vision of the President of Ghana who is mandated to ensure that Ghanaians have access to quality health care. The vision of the President is to lead the country into middle-income status of at least $1000 per capita by 2015. Three main pillars supporting this vision are:

- good governance;
- promotion of the private sector; and
- human resource development.

These pillars seek to increase and sustain economic growth and poverty reduction, which underpin the Government's strategy for wealth and employment creation, as outlined in the Ghana Poverty Reduction Strategy II (GPRSII). The health sector's contributing role is to make people in Ghana healthy. This also constitutes a framework for HRM policy direction over the next five years.

Health Sector Vision, Mission and Objectives

The MOH is responsible for improving the health status and reducing inequalities in health outcomes of all people living in the country through the development and promotion of proactive policies aimed at providing quality and affordable health services through its agencies.

The MOH's mission is to "work in collaboration with all parties in the health sector to ensure good health and vitality and equitable access to quality health care services for all people living anywhere in Ghana". The objectives of the sector are:

- To promote healthy lifestyles and reduce risk factors that arise from environmental, economic, social and behavioural causes;
- To ensure equitable access to good quality and affordable health services that improve health outcomes, respond to people's legitimate expectations and are financially fair;

- To mobilize resources for health, allocate equitably and ensure efficient utilization;
- To promote a local health industry that supports service delivery and creates jobs; and
- To develop and sustain an enabling policy and institutional environment for the health sector and promote effective collaboration with other ministries, departments and agencies (MDAs), the private sector, and NGOs.

The MOH seeks to promote healthy living, prevent disease and provide quality health care to those who need it. The MOH is responsible for setting standards for quality health care delivery through its regulatory bodies and seeks to mobilize resources for the implementation of programs in the sector. In conjunction with the Ministry of Education and the private sector, the MOH conducts training (pre-service) to prepare health professionals to be able to practice in Ghana. Effective health care delivery requires public-private sector collaboration. It is in this regard that the MOH encourages private sector participation in the training of health professionals and the delivery of health care to the people of Ghana.

Five-year Health Sector Goals

The five-year health sector goals are built around the Minister of Health's vision of wealth creation through provision of quality health care to the people of Ghana. This paradigm shift is focused on promotion and prevention of health in its totality and is aimed at escalating outcomes of the Millennium Development Goals (MDGs). The new paradigm aims at promoting healthy lifestyles, healthy eating and a healthy environment. This will ensure that people remain healthy, diseases and injuries are prevented, and people affected with diseases are restored and rehabilitated. This will reduce costs on the health care system and increase productivity, thereby enhancing national economic growth.

HRH – Vision and Goals

The overall goal of the human resource policy is to improve and sustain the health of Ghana's population by supporting appropriate human resource planning, management and training so that there is adequate production of appropriately trained staff and that the staff is motivated and retained to perform effectively and efficiently. The HRM policy is being driven by changes in the health sector policy. The following are the HRM policy measures for the next five years:

- Increase the production and recruitment of health workers focusing on mid-level staff;
- Retain, distribute equitably and increase productivity of health workers by strengthening supervision, refining compensation and incentive schemes, and enhancing legislation and regulation;
- Advocate and mobilize other professionals related to health care to contribute to the promotion and maintenance of health; and
- Empower environmental health inspectors to enforce standards for environmental hygiene.

Purpose

This document outlines the current situation in relation to HRH in Ghana and defines the goals to be achieved by 2011 through the health sector's policy direction and national development goals. Based on an analysis of the gap between these goals and the current situation, this document lays down the strategies that are to be pursued over the period 2007-2011 to ensure that sufficient human resources are available and effectively managed and utilized to enable the health sector to achieve its service delivery goals.

This document provides a framework for the agencies involved in the provision of health services to follow as a road map, outlining the actions they need to take to contribute to the achievement of the national HRH goals. These agencies include the:

- Ghana Health Service (GHS);
- teaching hospitals;

- Christian Health Association of Ghana (CHAG);
- Islamic health institutions;
- quasi-government health institutions;
- traditional herbal practitioners;
- regulatory bodies;
- training institutions; and
- private health sector.

Development Process

In October 2005, a forum on Human Resources for Health was conducted. The Minister of Health mandated a technical team to transpose the forum's recommendations into a human resources policy that would guide the recommendations' implementation. The technical team brought together representatives from the various agencies that contribute to the planning, training and management of HRH at a series of meetings. This document is the result of those meetings. Thus, this document builds upon the knowledge and experience of a wide array of stakeholders and it is intended that all agencies will accept the results as a common framework for action over the next five years.

Situation Analysis

Population of Ghana

The population of Ghana is presented in Table 1, based on the 2000 national population census. Currently, Ghana's population stands at 21.8 million and is expected to grow by 2.4% each year. Using this growth rate and applying it equally to each region, Table 1 shows that by 2011 the total population of Ghana will have increased to 24.5 million. (National Statistical Service, 2000)

Table 1: Population by Region for 2006 and Projected for 2011

Region	Population, 2000	Population, 2006	Projected Population, 2011
Ashanti	3,612,950	4,165,447.75	4,689,877.23
Brong Ahafo	1,815,408	2,093,022.92	2,356,534.31
Eastern	2,106,696	2,428,855.12	2,734,647.76
Central	1,593,823	1,837,552.81	2,068,900.54
Greater Accra	2,905,726	3,350,073.99	3,771,848
Northern	1,820,806	2,099,246.39	2,363,541.32
Upper East	920,089	1,060,790.39	1,194,343.81
Upper West	576,583	664,754.94	748,447.525
Volta	1,635,421	1,885,512.04	2,122,897.83
Western	1,924,577	2,218,886.21	2,498,243.78
National Total	18,912,079	21,804,142.6	24,549,282.1

Present Health Sector Facilities

Figure 1 shows the number of health facilities by organization in Ghana. The MOH, which is represented by the GHS and the teaching hospitals, owns about 49% of the total health facilities. The private sector owns about 21%, CHAG institutions own 8%, while the private maternity homes own about 17% of the total health facilities. Details on the facilities in each region are indicated in Annex 1 of this document.

Figure 1: Health Facilities in Ghana

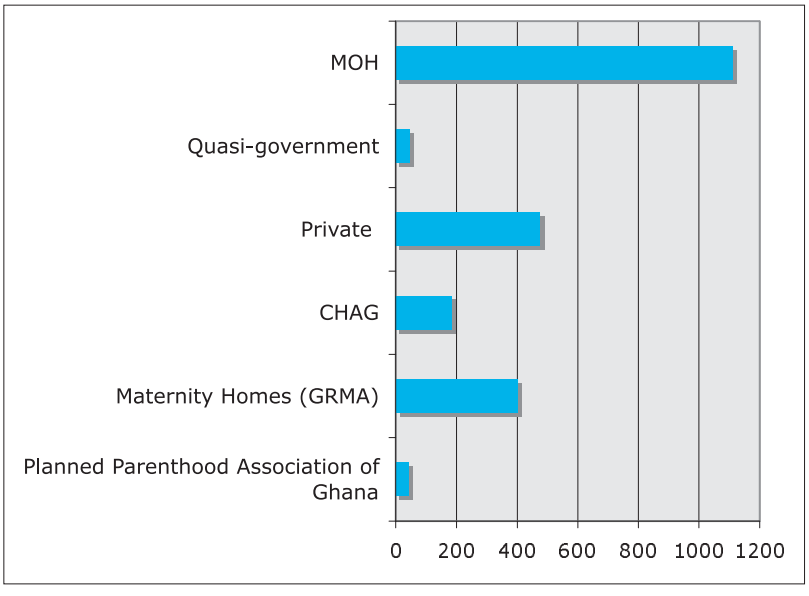


Figure 1 indicates the level of contribution from the various health care deliverers in Ghana. Even though there are about 200 centres for alternative medicine practices, there are 50 centres temporarily registered with the Traditional and Alternate Medicine Directorate of the MOH.

Present Numbers and Composition of Health Staff

Figure 2 shows the breakdown of the total workforce employed in the health sector. Approximately 52,258 individuals are currently formally working in the health sector in public, CHAG, private, Islamic mission, quasi-government and other organizations. The MOH employs a total of 42,299 staff in GHS, teaching hospitals, CHAG, and health training institutions, regulatory bodies, and headquarters. This number represents about 81.5% of the total health sector workforce. Details of distribution are represented in Annex 1 of this document.

Table 2: Health Workforce Distribution by Agency

Institute	%
GHS	54
CHAG	13
Private	10
Health Training Institutions	2
Regulatory Bodies	0.6
Islamic Mission	0.6
Quasi	8
Exp	0.4
National Ambulance Service	0.4
KBTH	6
KATH	5

Figure 2: Health Workforce Distribution by Agency

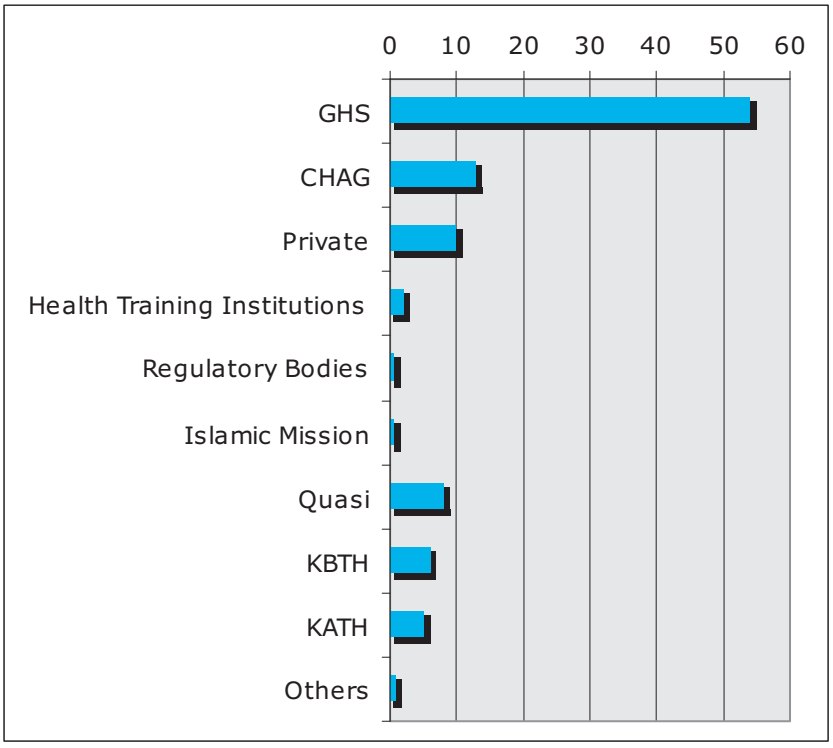


Table 3: Distribution of Health Workforce by Category

Category of Staff	Total Number
Medical Officers	2,026
Dental Surgeons	31
Pharmacists	1,550
Expatriate Doctors	200
Professional Nurses	7,304
Enrolled Nurses	2,956
Community Health Nurses	3,246
Registered Midwives	2,810
Medical Assistants	430
Allied Health Professionals	588
Traditional Birth Attendants	367
Non-clinical and Clinical Support Staff	27,918
Traditional Practitioners	21,182

Non-clinical support staff includes administrators, accountants, drivers and technical officers. Clinical support staff includes health aides and ward assistants. These health workers represent approximately 38% of the total health workforce officially employed. It is clear from Figure 3 that compared to clinical health care providers, the number of support staff is very high.

Although the total number of health staff is woefully inadequate, Table 3 shows that the highly trained professionals (doctors, pharmacists, nurses and specialized professionals) out number the mid-level workforce (community health nurses, enrolled nurses and medical assistants.) This presents a workforce with a weak base and an inappropriate skill mix.

Apart from the total health workforce in formal employment, about 21,791 people countrywide are registered as engaged in traditional medicine; while 367 persons are registered traditional birth attendants (TBAs). This indicates that about 69,000 people are involved in health care delivery. Given that most small communities have recognized traditional health practitioners, it is highly probable that there are many more traditional health practitioners than have been captured above. The traditional medicine sector is estimated to employ about 200,000 (Census Report, TAMPD, 2003). This is a considerable human resource for health care that needs to be tapped.

Figure 3: Distribution of Health Workforce by Category

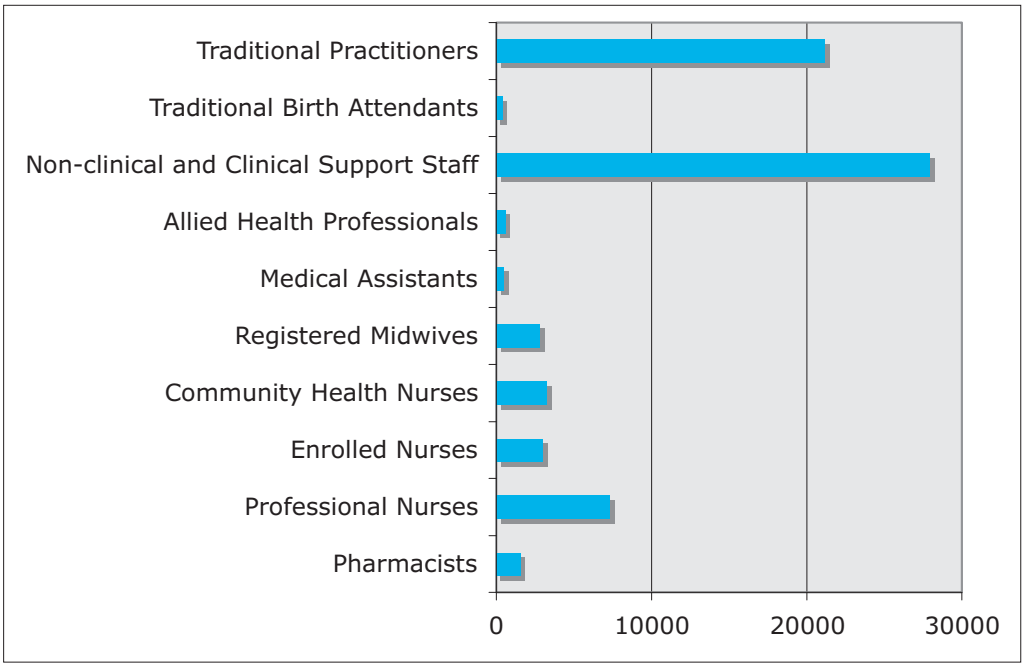


Table 4: Population per Health Work er in Ghana for Selected Cadres, 2005

Staff Category	Population per Staff Member	Staff Category	Population per Staff Member
Medical/Dental Officers	1:10,700	Traditional Medicine Practitioner	1:500
Pharmacists	1:14,286	Allied Health	1:37,075
Nurses	1: 1,587	Medical Assistants	1:43,600

Table 5: Population by Profession in Selected Countries

Country	Doctors	Nurses	Pharmacists
Ghana	1:10,700 (2005	1: 1,587 (2005)	1:14,286 (2005)
Togo	1:16,667 (2001)	1:5,887 (2001)	1:33,333 (2001)
Uganda	1:20,000 (2002)	1:20,000 (2002)	1:200,000 (2002)
South Africa	1:1,449 (2001)	1:257 (2001)	1:4,166 (2001)
USA	1:182 (2000)	1:130 (2000)	1:1,470 (2000)
Cuba	1:169 (2002)	1:134 (2002)	N/A

Table 6: Doctor/1000 Population Ratios (World Bank, 2001)

High income countries	2.8/1000
Middle income countries	1.8/1000
Low income countries	0.5/1000
Sub-Saharan Africa	0.1/1000

Considering the ratios indicated above, it is clear that for Ghana to attain a mid-level income status, as envisaged in the government's mission, it is necessary to accelerate the production and retention of critical health staff.

Gender and Age Distribution of Public Sector Health Staff

The total number of women working in the MOH (teaching hospitals, health training institutions, GHS and CHAG) is approximately 22,000, which represents 59% of the workforce. It is evident that while the nursing and midwifery professions are female dominated, the medical, allied and other clinical professions are male dominated.

The largest section of the workforce, 37.6%, falls within the 40-50 age group (see Tables 31 and 32 in Annex 1 for details). People in the age range of 18-39 years form about 25.9% of the total workforce and include those who are likely to migrate to more developed countries for higher incomes (Dovlo, D.Y. 1999). It is also clear from the age distribution that the staff closest to retirement are mostly medical assistants, enrolled nurses and midwives, and constitute about 34% of the entire workforce.

Distribution Patterns of Health Sector Staff

a) Geographical

Figures 4 and 5 indicate that highly skilled professionals, like medical doctors and specialized personnel (nurses, pharmacists, allied health professionals, etc.), are concentrated in the Greater Accra region, as well as in Korle Bu and Komfo Anokye Teaching Hospitals.

Figure 4: Geographical Distribution of Doctors

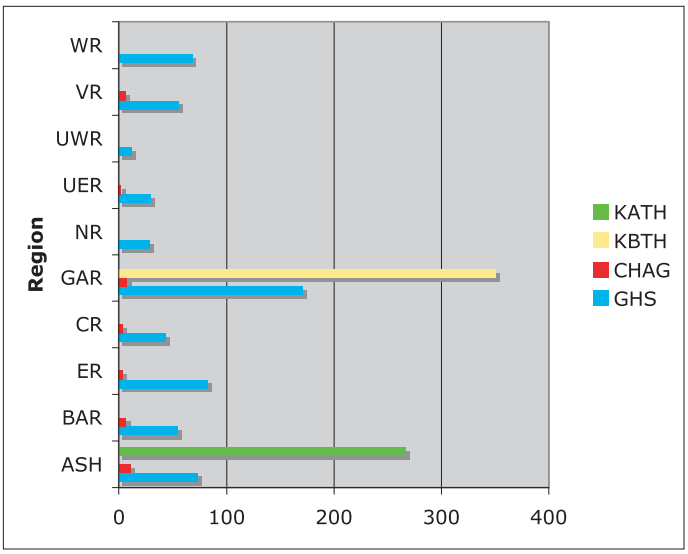
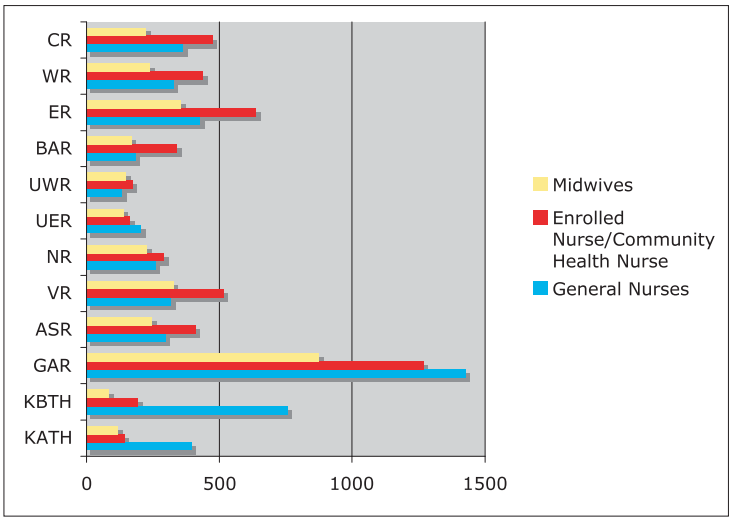


Figure 5: Geographical Distribution of Nurses



b) Public - Private

The majority of the highly skilled health staff is in the public sector, as suggested in Table 2. The private, self-financing sector, however, employs 10% of Ghana's health workforce, mostly in urban areas.

The private sector has a large number of health facilities, as indicated in Figure 1. Regardless, they appear to have a proportionately smaller number of staff than the public sector. Most of the data gathered on the private sector was through a census conducted with the support of DANIDA in 2001. This data revealed that there were more practitioners and facilities than were known to exist from previous studies. There has been no update since 2001.

A sampling of private practitioners in Accra (SPMDP, 2001) showed their average age to be 60 years. This presents a crisis on the horizon for the private health sector's human resources.

c) Public – Mission

Table 27 in Annex 1 shows that mission hospital and clinic staff are mostly semi-skilled, with auxiliary and ward assistants representing over 50% of employees. Mission institutions are predominantly located in semi-rural areas. In the past, even though the Islamic mission has been providing health care, their contribution had not been captured in health data for the MOH. This document addresses that issue.

Financing the Health Sector's Human Resources

Present Expenditure on Personnel Emolument by Agency

Tables 7 and 8 provide details of the 2005 salary and the additional duty hour allowance expenditures by the MOH, GHS, the teaching hospitals and sub-vented organizations. The sector allocated 26.5 billion cedis for recruitment. This amount was significantly low as the sector had a backlog of staff to be recruited formally. The amount could support only 20% of the sector's total recruitment needs.

Table 7: 2005 Salary Expenditure Budgeted for by Agency (in million cedis)

Cost Item	MOH	GHS	Teaching Hospitals	Sub-vented Organizations	Training Institutions	Total
Basic Salary	30.72	410.87	84.30	13.68	55.53	595.1
Recruitment	26.53 (all sector)					26.53

Table 8: Additional Duty Hours Allowance (in billions)

HQ (MOH/GHS/ Regulatory Bodies)	KBTH	GHS (Regions) and CHAG	KATH	Psychiatry Hospitals	TTH	Tax	Total
28.0	85.3	538.8	47.8	20.7	12.2	92.7	825.5

Table 9: 2005 Total Sector Allowances for Personnel from Budgetary Support

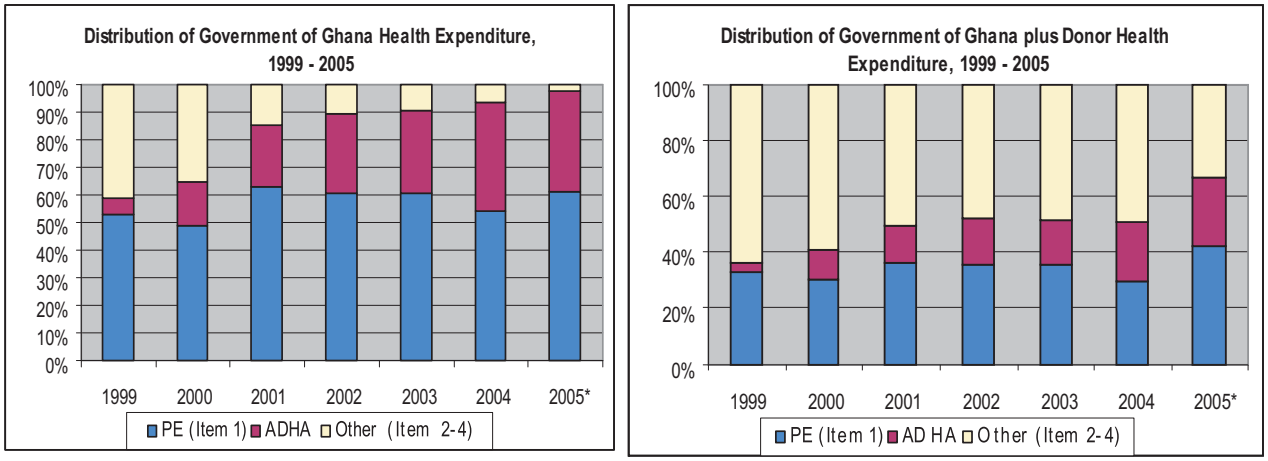
Cost Item	Budgetary allocation in cedis (billions)	
	2004	2005
Trainee Allowances	18.0	21.1
Expatriate Doctors	11.5	11.5
Deprived Area Incentive Scheme	10.5	-

Table 9, above, shows allowances paid to personnel in the sector between 2004 and 2005. An estimated total amount of 23 billion cedis was paid to expatriate doctors from Cuba and Egypt as allowances during the period. Again, in 2004, 10.5 billion cedis was paid to health workers in 55 deprived districts from the Highly Indebted Poor Country (HIPC) inflows. However this incentive scheme was not implemented in 2005 due to difficulty in accessing funds from HIPC inflows, thus, raising doubts about the scheme's sustainability. The MOH has therefore to reconsider ways of accessing funds for this scheme by incorporating the deprived area incentive (DAI) budget into the annual service budget of the sector.

Additional Duty Hour Allowance as a Retention Strategy and Its Implications on the Wage Bill

One retention strategy was the payment of additional duty hour allowance (ADHA) to health workers. However, as indicated in Table 8, above, and Figure 6, below, the ADHA became the main driver of the escalating wage bill in the health sector. The health worker productivity mapping (2006) indicates that the ADHA payments and salaries in 2005 accounted for 97% of total Government health expenditure and 67% of total Government and donor health expenditure. The sector is currently negotiating for a comprehensive salary structure that will acknowledge the contributions of various categories of health workers. The salaries shall respond to roles of health workers and worker productivity. The implementation of this salary structure abolished the ADHA.

Figure 6: Distribution of Health Expenditure from 1999-2005



(Adapted from Health Worker Productivity Mapping in Ghana. Unpublished World Bank study. (March 2006))

Staff Attrition

Attrition in the health sector covers the following factors:

- the vacation of posts;
- dismissal;
- resignation;
- retirement;
- termination of appointments; and
- death.

Figures 7, 8 and 9 depict a picture of the attrition rate of nurses and doctors in the Komfo Anokye Teaching Hospital and staff in the GHS from 2003 to 2006. There is a downward trend, showing a reduction in the rate of attrition, especially with vacation of post and resignations, which seem to be the critical challenges.

Figure 7: Attrition of Doctors in Komfo Anokye Teaching Hospital

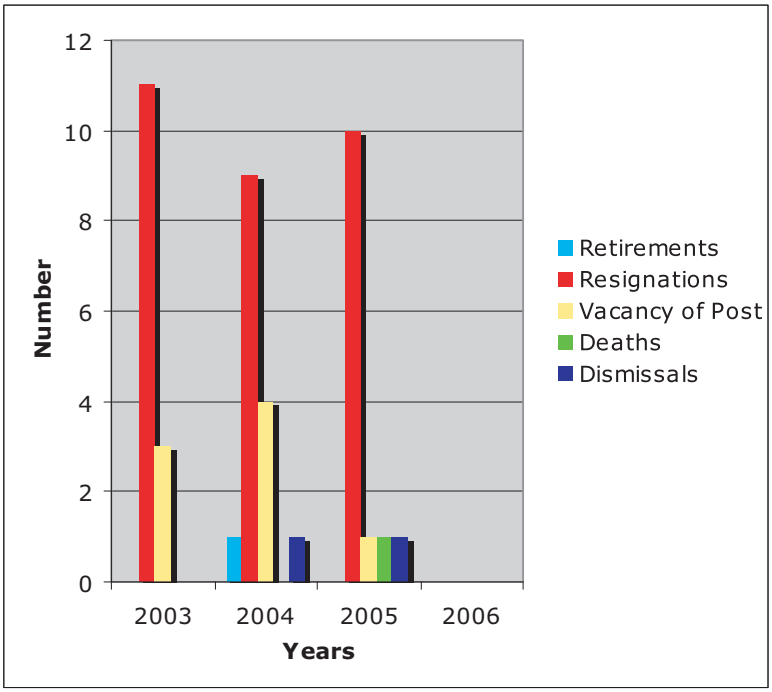
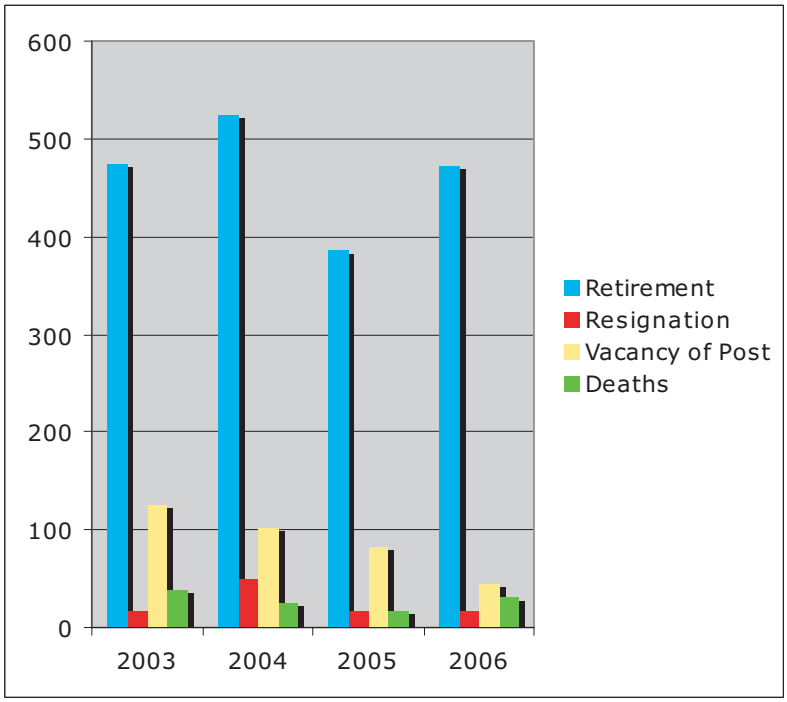


Figure 8: Attrition of Nurses in Komfo Anokye Teaching Hospital

Figure 9: Attrition of Staff in Ghana Health Service



Training of Health Professionals

Currently there are several training policies for the various categories of health workers developed from the MOH decrees that established the professions. The 2002-2006 Human Resource Policies and Strategies for the Health Sector gives direction on pre-service training, but does not adequately provide guidelines for the training institutions. Although training of health professionals has been a shared responsibility between the Ministries of Health and Education, there have not been clearly defined roles and collaboration. There is no comprehensive training policy to clarify roles and address training issues.

However, the MOH has taken steps to streamline certain critical pre-service training areas. One such measure has been the extension of house-jobs from one year to two years for medical and dental officers. The first year is designed to take place in teaching hospitals and the second year in accredited regional and district health facilities. This policy aims at addressing the issue with skilled competencies and redistribution of staff. However, it has not been fully implemented due to poor coordination.

The MOH's policy on increasing production of health workers has seen implementation difficulties. There has been the expansion of all existing health training institutions and the setting up of new institutions and programs as indicated in Table 10, below. Even though efforts have been made to expand the training institutions, much more needs to be done in terms of infrastructure to meet the increasing intake.

Table 10: Establishment of New Health Training Courses and Institutions

Type	**Institution**		
	MOH	**CHAG**	**Private**
Ghana College of Physicians and Surgeons	1	-	-
General Nursing	1	1	3
Direct Midwifery	8	-	-
Diploma in Community Health Nursing	2	-	-
Community Health Nursing	2	-	-
Medical Laboratory Technology	-	-	1
Health Assistants Clinical	7	-	2
Total	**21**	**1**	**6**

The last five years has seen the establishment of the Ghana College of Physicians and Surgeons and five general nursing schools. New programs have been introduced for direct entry into midwifery and health assistant (clinical) courses as well as a diploma in community health nursing. The MOH has established a total of 21 training institutions and programs over the last five years, some in new health training institutions and others in previously existing institutions. CHAG and the private sector together have opened seven new schools in general nursing and health assistants (clinical).

The policy of the MOH to increase the number of graduates together with strengthening capacities in most of the health training institutions has resulted in a 50% increase in admissions into health training institutions and a 20% increase in all admissions into universities since 2001. Despite these gains in recent years, the capacity of the health training institutions to train sufficient numbers to meet national requirements remains inadequate in terms of infrastructure (space), logistics, and teaching staff, as well as funding. The impact of increasing student numbers will be felt after three years of training for diploma programs and after seven years of training medical doctors, when these individuals graduate and start entering the workforce.

There has been stagnation in enrolment in the medical assistants' program as indicated in Figure 10, below. There is a clear indication that the current medical assistants' program is not attractive to nurses and the numbers applying have been dwindling since 2000.

The University of Development Studies in Tamale started a one-and-a-half-year program that grants nurses qualification as nurse practitioners. However, because adequate consultation was

not made with the MOH before the program started, there have been some problems with placement of graduates in the health sector.

Another area that has not received adequate recognition by the health sector is the training of traditional medicine practitioners through the Bachelor of Science in Traditional Medicine course offered at Kwame Nkrumah University of Science and Technology (KNUST). The problem is whether to place graduates in the formal sector or the informal sector and also how to integrate their work with orthodox practitioners.

A summary of the average pre-service training intake and output in the country since 1999 is given in Figures 10 and 11. More information on the training schools under the MOH, the universities, CHAG, the private sector and mid-level training are given in Annex 1.

Figure 10: Intake and Output of Selected Programs

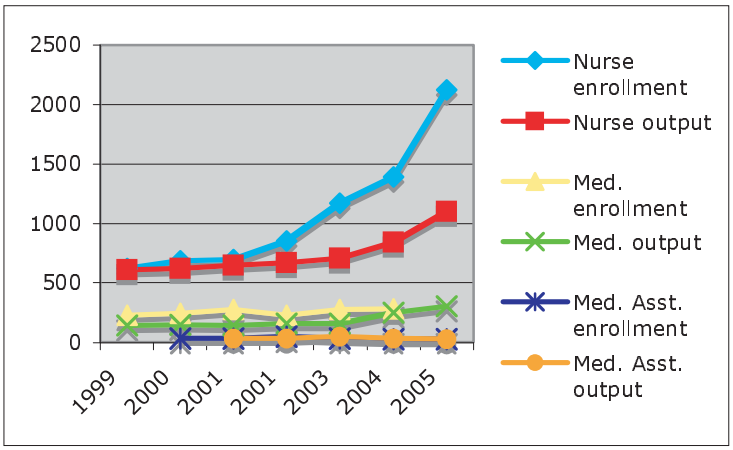


Figure 10 indicates intake and output of selected programs from 1999 to 2005. The figure shows a dramatic rise in the intake and output figures of nurses. There is a gradual increase in the medical officers' intake while that of medical assistants does not rise.

Figure 11: Intake into Selected Health Programs (2002-2005)

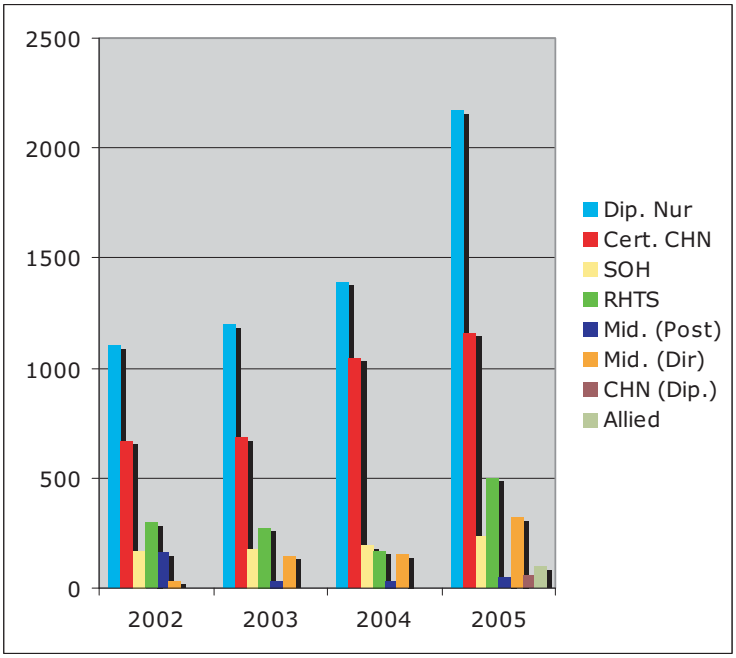


Figure 11, above, shows the intake into selected health programs from 2002 to 2005. The figure confirms the MOH's policy for the past four years on increasing intake into the health training institutions.

In-service Training

The GHS and the teaching hospitals have developed in-service training policies, which have been in place for several years. The policies spell out the training needs, frequency of training and areas of training, with respective curricula and credit points for career progression. Private institutions are expected to adopt the in-service training policies of the GHS. Various professional regulatory bodies have continuing professional education programs for their professional staff to enable them to renew their licenses to practice. Funding of in-service training has been from the annual budgetary allocations to the agencies and institutions. Development partners, including USAID, JICA, Population Council, Quality Health Partners, World Health Organization and DANIDA, have provided both technical and financial support for in-service training.

There are no formal strategies for distributing graduates from the medical schools, College of Health and Sciences, or health training institutions. Personnel move to places of their choice creating imbalances in the sector. The MOH has recently established an inter-agency committee to distribute staff based on annual recruitment plans and available staff. The MOH's Human Resource Directorate coordinates the work of this committee. Agency-specific recruitment needs are submitted to the committee and, based on the number of personnel available, the committee will distribute to the agencies.

In 1992 the MOH developed staffing norms for the entire health sector. This has been used by the GHS, CHAG and the teaching hospitals. Although attempts were made in 2003 to review the norms, analysis indicates that the current staffing capacity is inadequate. (Refer to Tables 11 to 14 for current staffing norms.)

Human Resource Management Situation

There are human resource directorates in the MOH and at agency levels. Currently the policy for recruitment, placement, and promotion within the agencies is an adaptation of an old policy from MOH.

The directorates have training, planning and management units. There are human resource managers at the regional levels and at the teaching hospitals. There are also training coordinators responsible for in-service training at the regional levels and at the teaching hospitals. The MOH's Human Resources Directorate takes overall responsibility for the health sector's human resources across the country.

The main functions of this Directorate are:

- HRH policy and strategy initiation and formulation;
- HRH planning and distribution of new health professionals among the agencies;
- to coordinate pre-service training and link up relevant universities and health facilities for graduate internships;
- HRH development and staff training functions and coordinate health sector fellowship scheme;
- HRH monitoring and evaluation; and
- to be responsible for other HRH functions that are cross-cutting and likely to generate conflict and mistrust among executing agencies.

Human resource functions in the agencies include:

- HRH policy implementation;

- initiation and formulation of HRH operational guidelines;
- HRH intra-agency planning, recruitment and deployment;
- in-service training and to present HRH career progression issues;
- HRH management issues;
- performance management;
- HRH monitoring and evaluation;
- management of fellowships; and
- to contribute to policy initiation, formulation and review.

Occupational Health and Safety

The development of health and safety issues in the health sector is currently at the rudimentary level. Challenges include inadequate supplies and the use of obsolete equipment that prevent staff from effectively performing.

Leadership and Supervision

Leadership in this context refers to the capacity at all levels of policy and service delivery to provide direction, align people, mobilize resources and attain goals. HRH leadership, at both national and agency levels, has been able to provide direction and mobilize resources though not adequately. Much, however, has been achieved in the area of professional association strengthening. HRH leadership has been able to identify and select champions and advocates, hence the introduction of a new salary structure for health workers and the formation of a HRH task group. However, HRH leadership at all levels has not been able to improve capacity for multi-sector and sector-wide collaboration. There are weak institutional capacities for effective supervision and monitoring at all levels of service delivery.

Staff Performance and Management

There is a staff performance appraisal system that is coordinated by the Office of Head of Civil Service. This system has become an ineffective tool for management because staff at all levels is mostly appraised only when due for promotion. Both hard working staff and poor performers are all graded "satisfactory". The GHS has recently made efforts to develop their own performance appraisal system although it is still in a trial stage. Other agencies have yet to develop appraisal systems.

HRH Retention

Over the last five years the MOH has instituted measures to attract and retain health workers in the country. These measures include;

- provision of high purchase saloon cars;
- a tax waiver for imported saloon cars;
- provision of housing schemes for health workers;
- continuing professional development;
- payment of additional duty hour allowance (which was recently abolished);
- establishment of the Ghana College of Physicians and Surgeons for postgraduate training of medical officers;
- consolidated salary; and
- improved human resource management practices in recruitment, placement, redeployment and promotions.

The strategy to institute a housing scheme for health workers has not been fully implemented. Some agencies secured lands for their staff to be developed on an individual basis. The revolving fund for the hire purchase vehicles was initiated in 2004 and to date 1,082 saloon cars have been distributed to health workers. The breakdown of distribution is demonstrated in Figure 12, below.

Figure 12: Hire Purchase Vehicles

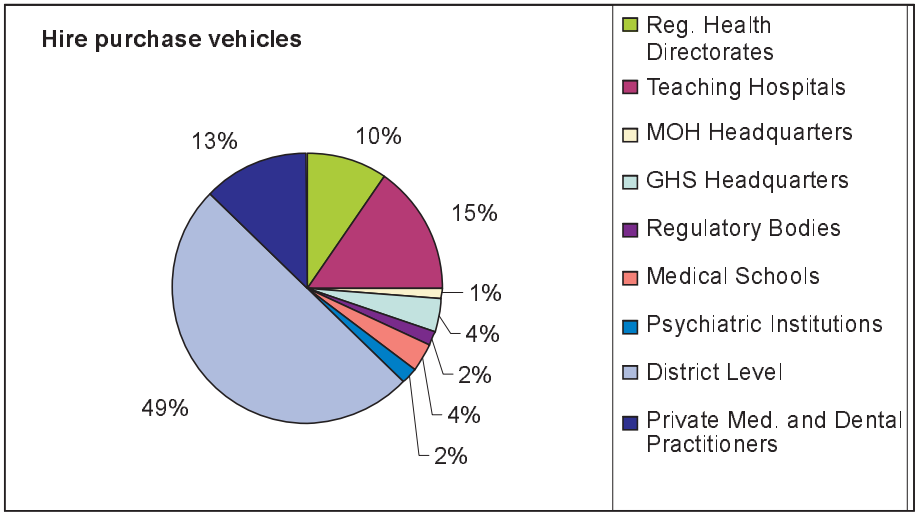
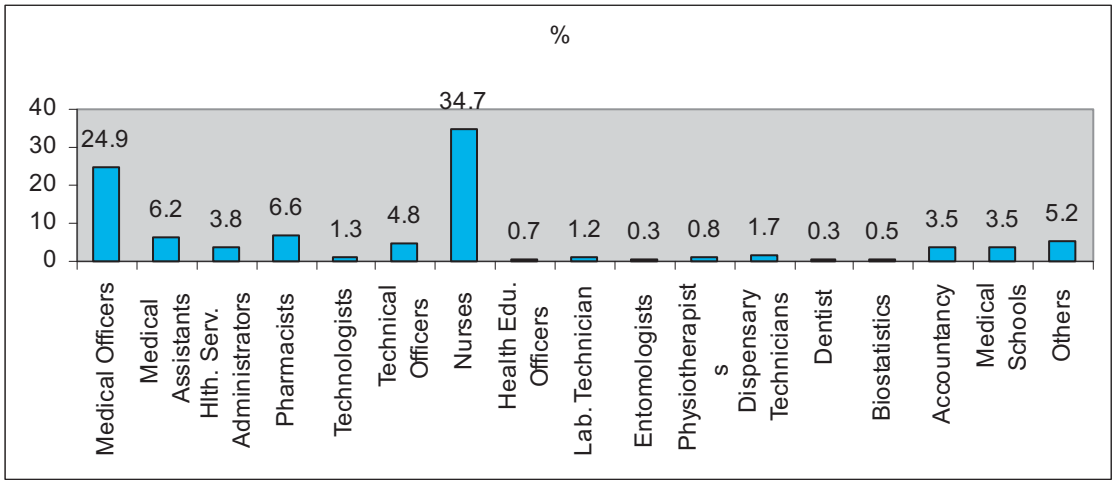


Figure 13: Hire Purchase Vehicles by Category of Staff



"Brain Gain" Project

The MOH in collaboration with the International Organization for Migration (IOM) and Migration for International Development Agency (MIDA) started the Brain Gain project in 2005. The project, which is being piloted for three years, is sponsored by the Netherlands' government and is scheduled to end in 2007. The project provides Ghanaian health professionals resident in Europe the opportunity to work on a short-term basis in Ghana during their vacation periods. In 2005, two medical officers based in the United Kingdom were engaged in CHAG institutions and four lecturers were engaged at the University of Ghana Medical School. There have been encouraging reports on the performance and conduct of the professionals and the MOH hopes to scale up the numbers in subsequent years.

Current Staffing Standards (Norms)

The tables below depict the current staffing norms for health sector facilities. Efforts are however being made to review these norms according to prevailing environmental conditions.

Table 11: Staffing Norms for Clinics, Health Centres and Polyclinics

LEVEL B FACILITIES							
	Levels						
Category	**A**		**B**		**C**		**D**
	Clinic/Rural MCH		Health Centres				Polyclinics
Medical Officer							3
Medical Assistant					1		1
Nurses – General	1	MID	1	SRN	1	SRN	15
Public Health Nurse	2	CHN	2	CHN	2	CHN	-
Pharmacy			2	CHN	2	CHN	-
Laboratory							3
Radiology							2
Medical Records							4
Administration							2
Dental							3
Environmental							
Pyschiatry							4
Ward Assistant/Clinic Assistant							
Orderlies/Labourer			2		2		4
Stores							
Transport			2				
Security/Watchman	1		1		1		2
Nutrition			2				
Epidemiology			1		1		1
Total	4		9		10		48
Indicator							
Average Daily OPD Attendances			1-10		11-60+		90-250+

Table 12: Summary of Staff Positions in District Hospitals

Levels:	**A**	**B**	**C**
Category			
Medical Officer	2	3	4
Medical Assistant	1		
Professional Nurses	15	21	36
Auxiliary Nurses	10	14	24
Dental	1	2	3
Pharmacy	2	3	4
Administration	2	3	4
Laboratory	3	3	4
Radiology	2	2	2
Medical Records	4	4	4
Catering	5	5	5
Stores	2	2	2
Laundry	3	4	5
Transport	2	2	2
Revenue Collector	1	1	2

Orderlies/Labourer	8	10	13
Ward Assistant/Clinic Assistant	3	3	3
Seamstress			
Maintenance	1	1	2
Anesthetist	1	1	2
Mortuary	1	1	2
Security	2	3	3
Total	71	88	126
Indicators			
Average bed occupancy	30	50	70+
Average daily OPD attendance	1-30	31-90	91+
Average daily admission	1-8	9-20	21+

Table 13: Summary of Staff Positions in Regional Hospitals

	Levels		
	A	**B**	**C**
Category			
Medical Officer/Specialist	9	12	16
Professional Nurses	90	108	121
Auxiliary Nurses	60	72	81
Dental	6	7	8
Pharmacy	10	12	21
Administration	8	8	12
Physiotherapy	2	3	4
Laboratory	6	8	12
Radiology	3	3	5
Medical Records	6	10	10
Catering	10	13	18
Stores	3	3	3
Laundry	8	9	8
Transport	3	3	5
Revenue Collector	4	8	10
Orderlies/Labourer	26	26	43
Ward Assistant/Clinic Assistant	10	10	10
Seamstress			
Maintenance	1	3	3
Anaethetist	2	3	3
Mortuary	2	2	2
Security	5	5	5
Total	274	328	400
Indicators			
Average bed occupancy	150	200	250+
Average daily OPD attendance	100	180	260
Average daily admission	12	18	24

Table 14: Summary of Clinical Positions in Teaching Hospitals

Directorate	Sub-specialty	Consultants	Specialists	Residents	Health Officers	Total
Obstetrics and Gynaecology	General (OB/GYN)	10	4	2	15	23
	Urogynaecology	2	1	1		3
	Gynaecological Oncology	2	1	1		3
	Endocrinology/Fertility Regulation	2	2	1		4
	Ultrasonography	2	1	1		3
	Maternal/Fetal Medicine	2	1	1		3
Sub total		**20**	**10**	**7**	**15**	**52**
Child Health	Pediatrics (General)	5	4	2	15	23
	Cardiology	1		1		2
	Neurology	1		1	2	
	Respiratory Medicine	1		1		2
	Pediatric Emergency	3	1	1		2
	Nephrology	1		1		2
	Gastroenterology	1		1		2
	Endocrinology	1		1		2
	Infectious Diseases	2	1	1	3	
	Neonatology	2	2	1		4
	Oncology/Haematology	1		1		2
Sub total		**18**	**8**	**12**	**15**	**53**
Medicine	*Internal Medicine (General)*	5	4	2	15	23
	Cardiology	2	1	1		3
	Endocrinology	2	1	1		3
	Neurology	2	1	1		3
	Renal Medicine	2	1	1		3
	Gastroenterology	2	1	1		3
	Clinical Pharmacology	1				1
	Respiratory Medicine and Tuberculosis	2				1
	Dermatology	2	1	1		3
	Rheumatology	1				
	Infectious Diseases	2	1	1		3
	Geriatrics	1				1
Sub total		**24**	**12**	**14**	**15**	**65**
Surgery	*General Surgery*	*5*	*4*	2	*15*	*23*
	Pediatric Surgery	2	2	1		4
	Plastic Surgery	2	2	1		4
	Urology	3	1	1		3
	Traumatology/Orthopaedics	5	4	2		8
	Neurosurgery	3		2		4
	Cardio/Thoracic Surgery	3		2		4
	Vascular Surgery	1		1		2
	Hand Surgery	1		1		2
Sub total		**29**	**13**	**13**	**15**	**70**
Dental, Eye, Ear, Nose, Throat						
Oral Health	Oral/Maxillofacial Surgery	1	2	1		4
	Restorative Dentistry – Prosthodontics - Periodontics - Conservation	1 1 1				3

	Orthodontics	2	3	4		8
	Public Health (oral)	**1**				
Eye	Ophthalmology	3	2	2		6
Ear, Nose, and Throat	ENT	3	1	3		1
Sub total		**12**	**8**	**8**		**52**
Critical and Intensive Care	Intensive Care	10	2	2		6
Anaesthesia		10	4	8		2
Public Health		2		1		2
Polyclinic	Family Medicine	**3**	**6**	**5**		**29**
Lab-based Medicine	Pathology-Anatomic Histocytology Forensic	2 2 2	2	2 1 1		11
	Chemical Pathology	2	1	1		3
	Radiology/Imaging	4	2	1	4	
	Microbiology (Bacteriology) (Parasitology) (Virology)	 2 1 1	1	1 1 1 1		9
	Haematology	2	1	1		3
Sub total		**20**	**7**	**11**		**38**
Radiotherapy	Radiation Oncology	2	3	1		5
	Nuclear Medicine	1		1		2
Sub total		**3**	**3**	**2**		**8**
Psychiatry		**3**				**3**
	Total	**132**	**67**	**71**	**60**	**330**

Legend:
Medical Doctors
1 Consultant/Specialist: 20 beds
1 Consultant: 1 Resident
1 Major specialty area: 15 House Officer

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Table 15: Service Output Analysis and Determination of Nursing Staff Needs for Teaching Hospitals

Departmental Unit	Beds Available	Occupancy Rate	Beds Occupied	No. of Wards	No. of Nurses	Remarks
MEDICINE	198	70%	139	5	139	1:3 3Shift
OB/GYN	146	134%	198	5	198	+MID
CH. H'TH	148	133%	197	5	197	1:3 for 3 shift
SURGERY	283	85%	241	10	241	1:3 for 3shift
DE.,ENT	40	53%	21	2	21	Do
INT. CARE	7	71%	5	1	10	2:1 for 3shift
PSYCH.	12	50.2%	6	2	6	1:3 for s shift
CASUALTY	20	100%	20	2	20	Do
REP.HELH					10	Does trg./ser

A&E (OPD)					9	3 shifts for 2 consult. rooms
Theatre Recovery					45	(1:3)15 cases/day
Gen.OPD Recovery	19	66%	13	3	13	1:3 for 3 shifts
Specialist (OPD)					30	Holds 15 clinics with 30 consult. rooms
Radiation Therapy	3	100%	3	1	10	1:3 for 3 shifts
Blood Bank					10	Will perform bleeding
Nurse Anaest					30	
Gen. OPD. At Polyclinic					13	6 consultation rooms
Treatment Room					5	1 inj. Room for 3 shifts and 2 for Dress. room
Total	876	704	36		**1007**	

Table 16: Clinical Staff at Private Hospitals

Category Of Staff	**Small**	**Medium**	**Large**
Senior Doctors	1	2 Specialties	5 Specialties
Junior Doctors/Mos	0	0	2
Nurses (SRN)	1	4	6
(AUX)	1	8	14
Pharmacy			
Pharmacist	Nil	Nil	Nil
Technicians	Nil	1	3
Lab			
Lab Technologist	Nil	Nil	1
Lab Technicians	Nil	1	2
X-ray (if there are facilities)			
X-ray Technicians	-	-	1
X-ray Assistants	-	-	1
Total	**3**	**16**	**35**

Table 17: Non-clinical Staff at Private Hospitals

Category Of Staff	Small	Medium	Large
Health Service Admin.	-	-	1
Accounts Staff	1	1	1
Receptionist/Secretary	1	1	1
Maintenance team	-	-	1
Driver	-	-	1
Orderlies/Cleaners	1	2	3
Security	1	1	1
Total	**4**	**5**	**9**

Table 18: Summary of Desired Tutor-Student Ratios

Program	SRN	CHN	PHN	RMN	EHA	EHO	TO	FT	MLT	CCN	PON	MID
Ratio	1:15	1:10	1:15	1:15	1:15	1:15	1:15	1:15	1:15	1:10	1:10	1:10

Human Resource Challenges

The national health system currently faces compounding challenges, including:

- inequitable distribution of workers at different levels of services delivery;
- inadequate staff numbers;
- low morale and motivation of health workforce;
- inadequate supportive/facilitative supervision;
- high attrition of health workers;
- weak performance management systems;
- limited training capacity to meet increasing numbers into the training institutions; and
- inadequate collaboration between MOH and Ministry of Education training institutions.

Projected Human Resource Requirements for 2011

Based on the needs and supply analysis under the situational analysis, human resource needs and supply of the various categories of health professionals for the period 2007-2011 can be deduced based on the 2006 figures.

Table 19: Service Delivery Goals for 2011*

INDICATOR	2006	2007	2008	2009	2010	2011
Reducing Maternal Mortality						
Maternal Mortality Rate	214	210	200	185	160	120
ANC Coverage	95	95	95	96	96	99
Supervised Delivery	58	59	60	62	65	70
Maternal Mortality (Institutional)	2.4	2.3	2.2	2.1	1.8	1.5
TT2 + Immunization	90	91	92	93	95	96
IPT Coverage in pregnant women	20	25	30	33	40	55
TFR	4.4	4.4	4.4	4.3	4.3	4.2
CPR for modern methods	0.26	0.27	0.28	0.3	0.35	-
Child Morbidity and Mortality						
Infant mortality rate	66	66	64	62	59	53
CMR	111	110	105	103	100	90
Districts implementing IMCI	0.37	0.4	0.43	0.45	0.55	0.65
Penta 3 Coverage	0.91	0.91	0.92	0.92	0.94	0.94
Districts with ≥80% EPI coverage	NA	0.6	0.65	0.66	0.7	0.75
Underweight in children ≤ 5 years	22.1	20.0	19.0	18.0	16.0	14.0
Reducing Old Communicable Disease Burden						
Malaria Control						
At risk group sleeping under ITN	0.04	0.07	0.09	0.15	0.25	0.35
Correct management of malaria cases in health Institutions	0.35	0.37	0.39	0.41	0.5	0.6
Guinea worm cases	5900	4000	3500	3000	2000	1500
Threats to Life Expectancy						
HIV/AIDS						
HIV sero-prevalence	3.6	3.6	3.5	3.5	3.0	2.0
HIV awareness	0.95	0.99	0.99	0.99	0.99	0.99
Condom use	0.18	0.2	0.22	0.23	0.26	0.3
PLWHA on ART	<1%	0.02	0.04	0.08	0.15	0.25
Tuberculosis						
Treatment success	0.5	0.52	0.53	0.54	0.6	0.7
Case detection rate	0.37	0.4	0.45	0.47	0.55	0.6
Neglected Diseases						
CDTI coverage for lymphatic filariasis	0.75	0.75	0.75	0.75	0.75	0.75
Coverage of Schisto treatment	0.05	0.08	0.1	0.12	0.15	0.25
TT prevalence in women	NA	<3%	<3%	<3%	<3%	<3%
Buruli prevalence in endemic districts/100,000	147	146	146	144	140	130
Buruli cases under on treatment	720	720	705	730	750	800

* Targets by the GMHI based on upward review of the GPRS targets

Table 20: Planned Expansion of Facilities, MOH

Level	No. of facilities needed	Current Situation	GAP
Community-level CHPS Compounds	6 CHPS compounds x 6 sub-districts x 138 Districts = 4,968	47 + 374 Clinics = 421	4547
Sub-district Health Centres	6 health centres x 138 districts =828	488	340
District Hospitals	138	72	66
Regional Hospitals	10	10	0
Ambulance Stations	1 station per district (138)	19	119
Teaching Hospitals	4	2	2

Table 21: Health Intervention Strategies

Strategy	2006	2007	2008	2009	2010	2011
CHPS	320	320	320	320	320	320
National Health Insurance	30	40	50	55	65	80

Projection of Staff Supply

Table 22 provides details of projected increases in the pre-service training capacity for the health professions in Ghana.

Table 22: Human Resource Training Projections

S/N							
1	**Medicine (doctors)**						
	Year	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
	Intake (10% increase over each year)	260	286	315	346	381	419
	1% dropout rate	3	3	3	3	4	4
	Output	250	275	303	333	366	403
2	**Pharmacy**						
	Year	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
	Intake (10% increase over each year)	110	121	133	146	161	177
	1% dropout rate	1	1	1	1	2	2
	Output	90	100	100	105	138	151
3	**Pharmacy Technician/Technology**						
	Year	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
	Intake (10% increase over each year)	76	84	92	101	121	133
	1% dropout rate	1	1	1	1	1	1
	Output	62	45	47	75	83	91
4	**General Nursing (degree)**						
	Year	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
	Intake (5% increase over each year)	90	95	99	104	109	115
	1.5% dropout rate	1	1	1	2	2	2
	Output	30	30	30	40	89	93

5	**General Nursing (diploma), Public**						
	Year	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
	Intake (5% increase over each year)	1850	1943	2040	2142	2249	2361
	0.5% dropout rate	9	10	10	11	11	12
	Output	1200	1300	1415	1841	1933	2029
6	**General Nursing (diploma), Private**						
	Year	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
	Intake (5% increase over each year)	200	201	203	205	207	209
	1% dropout rate	2	2	2	2	2	2
	Output	120	120	120	198	199	201
7	**Mental Nursing (diploma)**						
	Year	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
	Intake (5% increase over each year)	370	389	408	428	450	472
	1% dropout rate	4	4	4	4	4	5
	Output	150	200	250	366	385	404
	Total production (general nursing)	**1500**	**1650**	**1815**	**2445**	**2606**	**2727**
8	**Midwifery (diploma)**						
	Year	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
	Intake (20% increase over each year)	535	642	770	924	1109	1331
	1% dropout rate	5	6	8	9	11	13
	Output	140	250	313	530	636	763
9	**Midwifery (post basic)**						
	Year	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
	Intake (5% increase over each year)	150	158	165	174	182	191
	1% dropout rate	2	2	2	2	2	2
	Output	60	149	156	164	172	181
	Total production (midwives)	**200**	**399**	**469**	**694**	**808**	**944**
10	**Community Health Nursing (diploma)**						
	Year	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
	Intake (5% increase over each year)	60	63	66	69	73	77
	2% dropout rate	1	1	1	1	1	2
	Output	0	48	59	62	65	68
11	**Community Health Nursing (certificate)**						
	Year	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
	Intake (20% increase over each year)	1660	1992	2191	2410	2651	2916
	0.5% dropout rate	8	10	11	12	13	15
	Output	1173	1340	1652	1982	2180	2398
	Total production (community health nurses)	**1173**	**1388**	**1711**	**2044**	**2245**	**2466**
12	**Medical Assistants (diploma)**						
	Year	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
	Intake (50% increase over each year)	50	75	83	91	100	110
	2% dropout rate	1	2	2	2	2	2
	Output	0	0	0	49	74	81

13	**Medical Assistants (post basic)**						
	Year	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
	Intake (5% increase over each year)	103	108	114	119	125	131
	2% dropout rate	2	2	2	2	3	3
	Output	41	101	106	111	117	123
14	**Community Oral Health (diploma)**						
	Year	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
	Intake (5% increase over each year)	7	7	8	8	9	9
	2% dropout rate	0	0	0	0	0	0
	Output	9	7	7	8	8	8
	Total production (medical assistant)	**50**	**108**	**113**	**168**	**199**	**212**
15	**Health Assistants, Clinical (certificate) public**						
	Year	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
	Intake (20% increase over each year)	460	552	662	795	954	1145
	1% dropout rate	5	6	7	8	10	11
	Output	0	0	455	546	656	787
16	**Health Assistants, clinical (certificate) Private**						
	Year	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
	Intake (10% increase over each year)	100	110	121	133	146	161
	1% dropout rate	1	1	1	1	1	2
	Output	0	0	99	109	120	132
	Total production (health assistant clinical)	**0**	**0**	**554**	**655**	**776**	**919**
17	**Health Assistants, Lab (certificate)**						
	Year	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
	Intake (5% increase over each year)	0	50	53	55	58	61
	2% dropout rate	0	1	1	1	1	1
	Output	0	0	0	49	51	54
18	**Ear, Nose and Throat (post basic nursing)**						
	Year	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
	Intake (5% increase over each year)	15	16	17	17	18	19
	1% dropout rate	0	0	0	0	0	0
	Output	15	15	15	16	17	18
19	**Anesthesia (post basic nursing)**						
	Year	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
	Intake (5% increase over each year)	48	50	53	56	58	61
	0.5% dropout rate	0	0	0	0	0	0
	Output	44	48	50	53	55	58
20	**Residents (medicine and dental)**						
	Year	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
	Intake (10% increase over each year)	115	116	117	118	120	121
	5% dropout rate	6	6	6	6	6	6
	Output	0	64	65	109	110	111
21	**BSc. Herbal Medicine**						
	Year	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
	Intake (5% increase over each year)	15	16	17	17	18	19

	2% dropout rate	0	0	0	0	0	0
	Output	15	15	15	15	15	15
22	**Technical Officers (community health, diploma)**						
	Year	2006	2007	2008	2009	2010	2011
	Intake (No increase for the next five years)	85	85	85	85	85	85
	1% dropout rate	1	1	1	1	1	1
	Output	0	70	70	84	84	84
23	**Technical Officers (health information, diploma)**						
	Year	2006	2007	2008	2009	2010	2011
	Intake (10% increase over each year)	60	66	73	80	88	97
	1% dropout rate	1	1	1	1	1	1
	Output	30	30	30	59	65	72
24	**Technical Officers (medical laboratory, diploma)**						
	Year	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
	Intake (10% increase over each year)	40	44	48	53	59	64
	1% dropout rate	0	0	0	1	1	1
	Output	0	0	29	39	43	47
25	**Field Technicians (certificate)**						
	Year	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
	Intake (10% increase over each year)	100	110	121	133	146	161
	1% dropout rate	1	1	1	1	1	2
	Output	80	80	99	109	120	132
26	**Environmental Health (diploma)**						
	Year	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
	Intake (5% increase over each year)	70	74	77	81	85	89
	2% dropout rate	1	1	2	2	2	2
	Output	60	60	60	69	72	76
27	**Environmental Health Asst. (certificate)**						
	Year	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
	Intake (10% increase over each year)	250	275	303	333	366	403
	1% dropout rate	3	3	3	3	4	4
	Output	150	150	248	272	299	329
	Total production (environmental health officers)	**210**	**210**	**308**	**341**	**372**	**405**
28	**Public Health Nursing (post basic)**						
	Year	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
	Intake (No increase)	40	40	40	40	40	40
	N/A	0	0	0	0	0	0
	Output	40	40	40	40	40	40
29	**Laboratory Technology (diploma, universities)**						
	Year	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
	Intake (5% increase over each year)	70	74	77	81	85	89
	1% dropout rate	1	1	1	1	1	1
	Output	45	45	45	69	73	76
30	**Medical Laboratory (degree)**						
	Year	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**

	Intake (5% increase over each year)	52	55	57	60	63	66
	1% dropout rate	1	1	1	1	1	1
	Output	50	50	50	50	51	54
	Total production (laboratory technician)	**95**	**95**	**95**	**119**	**124**	**130**
31	**X-ray Technicians (diploma)**						
	Year	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
	Intake (5% increase over each year)	10	11	11	12	12	13
	1% dropout rate	0	0	0	0	0	0
	Output	10	10	10	10	10	11
32	**X-ray Technicians (degree)**						
	Year	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
	Intake (5% increase over each year)	58	70	82	94	106	118
	1% dropout rate	1	1	1	1	1	1
	Output	50	50	50	50	57	69
	Total production (X-ray technician)	**60**	**60**	**60**	**60**	**68**	**80**
33	**Physiotherapy (degree)**						
	Year	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
	Intake (5% increase over each year)	31	33	34	36	38	40
	1% dropout rate	0	0	0	0	0	0
	Output	30	30	30	30	31	32
34	**Peri-operative Nursing**						
	Year	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
	Intake (5% increase over each year)	44	46	49	51	53	56
	1% dropout rate	0	0	0	1	1	1
	Output	40	44	46	48	50	53
35	**Ophthalmic Nursing**						
	Year	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
	Intake (5% increase over each year)	30	32	33	35	36	38
	1% dropout rate	0	0	0	0	0	0
	Output	30	30	31	33	34	36
36	**Emergency Medical Technicians**						
	Year	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
	Intake (10% increase over each year)	58	64	70	77	85	93
	2% dropout rate	1	1	1	2	2	2
	Output	57	63	69	76	83	92
37	**Oral Health (technical officer)**						
	Year	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
	Intake (5% increase over each year)	30	32	33	35	36	38
	1% dropout rate	1	1	1	1	1	1
	Output	29	31	32	34	36	38

Table 23: Supply and Projections

MEDICAL OFFICERS						
	2006	2007	2008	2009	2010	2011
Projected 2.4% population growth	21,804,143	22,327,442	22,863,301	23,412,020	23,973,908	24,549,282
No. at Post (January)	2,026	2,238	2,671	3,135	3,631	4,163
Current ratio (1:10,762)	10,762	9,976	8,559	7,469	6,603	5,897
No. required based on norms (1: 6000)	3,732	3,732	3,732	3,732	3,732	3,732
1.5% attrition (outward migration, deaths, resignations)	30.39	33.57	40.07	47.02	54.46	62.44
Shortfall	1,996	2,205	2,631	3,088	3,576	4,101
Annual production (output from schools, October)	250	275	303	333	366	403
Other recruitments (contracts, re-engagements, expatriate)	0	200	210	221	232	243
Number by October	2,238	2,671	3,135	3,631	4,163	4,734
GAP (November-December)	1,494	1,061	597	101	(431)	(1,002)
GENERAL NURSES (RGN, SRN, ENROLLED.)						
	2006	2007	2008	2009	2010	2011
Projected 2.4% population growth	21,804,143	22,327,442	22,863,301	23,412,020	23,973,908	24,549,282
No. at Post (January)	10,260	11,459	13,023	14,720	16,999	19,391
Current ratio (1:2,125)	2,125	1,949	1,756	1,590	1,410	1,266
No. required based on norms	19,181	19,181	19,181	19,181	19,181	19,181
2.5% attrition (outward migration, deaths, resignations)	257	286	326	368	425	485
Shortfall	10,004	11,172	12,697	14,352	16,574	18,906
Annual production (output from schools, October)	1,500	1,650	1,815	2,445	2,605	2,727
Other recruitments (contracts, re-engagements, expatriate)	-	250	263	276	289	304
Number by October	11,459	13,023	14,720	16,999	19,391	21,855
GAP (November-December)	7,723	6,158	4,461	2,182	(210)	(2,674)
MIDWIVES						
	2006	2007	2008	2009	2010	2011
Projected 2.4% population growth	21,804,143	22,327,442	22,863,301	23,412,020	23,973,908	24,549,282
No. at Post (January)	2,810	2,962	3,424	3,953	4,699	5,550
Current ratio (1:7,759)	7,759	7,538	6,677	5,923	5,102	4,423
No. required based on norms	8,205	8,205	8,205	8,205	8,205	8,205
1.5% attrition (outward migration, deaths, resignations)	42	44	51	59	70	83

Shortfall	2,768	2,917	3,373	3,894	4,628	5,467
Annual production (output from schools, October)	200	399	468	693	807	943
Other recruitments (contracts, re-engagements, expatriate)	-	120	126	132	139	146
Number by October	2,962	3,424	3,953	4,699	5,550	6,528
GAP (November-December)	5,243	4,781	4,252	3,506	2,655	1,677
COMMUNITY HEALTH NURSES						
	2006	2007	2008	2009	2010	2011
Projected 2.4% population growth	21,804,143	22,327,442	22,863,301	23,412,020	23,973,908	24,549,282
No. at Post (January)	3,246	4,375	5,805	7,546	9,604	11,846
Current ratio (1:6,717)	6,717	5,104	3,938	3,103	2,496	2,072
No. required based on norms	12,934	12,934	12,934	12,934	12,934	12,934
1% attrition (outward migration, deaths, resignations)	32	44	58	75	96	118
Shortfall	3,214	4,331	5,747	7,470	9,508	11,728
Annual production (output from schools, October)	1,173	1,388	1,711	2,044	2,245	2,466
Other recruitments (contracts, re-engagements, expatriate)	-	100	105	110	116	122
Number by October	4,375	5,805	7,546	9,604	11,846	14,291
GAP (November-December)	8,559	7,129	5,388	3,330	1,088	(1,357)
LABORATORY TECHNICIANS/TECHNOLOGISTS						
	2006	2007	2008	2009	2010	2011
Projected 2.4% population growth	21,804,143	22,327,442	22,863,301	23,412,020	23,973,908	24,549,282
No. at Post (January)	430	518	609	699	812	928
Current ratio (1:50,707)	50,707	43,136	37,549	33,491	29,529	26,447
No. required based on norms	1,062	1,062	1,062	1,062	1,062	1,062
1.5% attrition (outward migration, deaths, resignations)	6	8	9	10	12	14
Shortfall	424	510	600	689	800	914
Annual production (output from schools, October)	95	95	95	119	124	130
Other recruitments (contracts, re-engagements, expatriate)	-	55	6	6	6	
Number by October	518	609	699	812	928	1,049
GAP (November-December)	544	453	363	250	134	13
X-RAY TECHNOLOGISTS						
	2006	2007	2008	2009	2010	2011

Projected 2.4% population growth	21,804,143	22,327,442	22,863,301	23,412,020	23,973,908	24,549,282
No. at Post (January)	108	166	227	287	346	413
Current ratio (1:201,890)	201,890	134,681	100,856	81,605	69,209	59,419
No. required based on norms	1,062	1,062	1,062	1,062	1,062	1,062
1.5% attrition (outward migration, deaths, resignations)	2	2	3	4	5	6
Shortfall	106	163	223	283	341	407
Annual production (output from schools, October)	60	60	60	60	68	80
Other recruitments (contracts, re-engagements, expatriate)	–	4	4	4	5	5
Number by October	166	227	287	346	413	491
GAP (November-December)	896	835	775	716	649	571
PHARMACISTS						
	2006	2007	2008	2009	2010	2011
Projected 2.4% population growth	21,804,143	22,327,442	22,863,301	23,412,020	23,973,908	24,549,282
No. at Post (January)	1,550	1,629	1,714	1,824	1,910	2,072
Current ratio (1:14,067)	14,067	13,704	13,337	12,836	12,551	11,850
No. required based on norms (1:8,000)	2,726	2,625	2,625	2,625	2,625	2,625
1.5% attrition (outward migration, deaths, resignations)	23	24	26	27	29	31
Shortfall	1,527	1,605	1,689	1,797	1,881	2,041
Annual production (output from schools, October)	95	100	124	100	175	138
Other recruitments (contracts, re-engagements, expatriate)	8	10	12	14	16	20
Number by October	1,629	1,714	1,824	1,910	2,072	2,198
GAP (November-December)	1,097	911	801	715	553	427
HEALTH ASSISTANTS						
	2006	2007	2008	2009	2010	2011
Projected 2.4% population growth	21,804,143	22,327,442	22,863,301	23,412,020	23,973,908	24,549,282
No. at Post (January)	--	--	--	554	776	919
Current ratio	--	--	--	42,260	30,894	26,713
No. required based on norms	7,176	7,176	7,176	7,176	7,176	7,176
0.5% attrition (outward migration, deaths, resignations)	--	--	--	3	4	5
Shortfall	--	--	--	551	772	914
Annual production (output from schools, October)	--	--	554	655	776	919
Other recruitments (contracts, re-engagements, expatriate)	--	--	--	--	--	--
Number by October	--	--	554	1,203	1,544	1,829

GAP (November-December)	7,176	7,176	6,622	5,973	5,632	5,347
MEDICAL ASSISTANTS						
	2006	2007	2008	2009	2010	2011
Projected 2.4% population growth	21,804,143	22,327,442	22,863,301	23,412,020	23,973,908	24,549,282
No. at Post (January)	500	557	666	779	943	1,136
Current ratio (1:43,608)	43,608	40,067	34,310	30,060	25,414	21,606
No. required based on norms	1,242	1,242	1,242	1,242	1,242	1,242
1.5% attrition (outward migration, deaths, resignations)	8	8	10	12	14	17
Shortfall	493	549	656	767	929	1,119
Annual production (output from schools, October)	50	103	108	162	193	206
Other recruitments (contracts, re-engagements, expatriate)	15	15	15	15	15	15
Number by October	557	666	779	943	1,136	1,339
GAP (November-December)	685	576	463	299	106	(97)

Human Resource Policies and Strategies for 2007-2011

Human resource policies and strategies for the health sector for the next five years are geared towards tackling the sector's existing challenges. The workforce goal is aimed at getting the "right workers with the right skills in the right place doing the right things" (WHO, World Global Report, 2006). Emphasis is on producing adequate numbers, retaining them, and periodically updating their skills to respond to health situations and future challenges.

The development of the policies and strategies in this document centre on a critical analysis of the global health worker situation, national development goals and the policy direction of the health sector. It also focuses on human resource challenges in Ghana, impact of the existing human resource polices and WHO models on health worker productivity. This is aimed at ensuring health worker availability, competence and skill development, responsiveness to emerging challenges, and higher productivity.

Key Policy Questions

Critical analysis of the challenges has led to the following key policy questions.

- How does the health sector ensure more equitable distribution and skill mix of health staff at different levels of care and geographical locations?
- What can the health sector do to retain trained health professionals?
- How does the health sector address HRH gaps with nonprofessional health workers?
- What are the HRH requirements for meeting the MDGs for health?
- What can the health sector do to expand the mid-level health workforce?
- How does the health sector finance and sustain HRH remunerations?
- What category of staff is needed over the short to medium term?
- What creative and effective retention strategies are currently in place and how can these be sustained?
- What kind of contractual arrangement should the MOH put in place to get returns on investment in trained health workers to ensure brain gain?
- How can the training of health workers be scaled up to ensure quality and efficient health care delivery?
- How can the health sector ensure competency-based training?
- How does the health sector improve and better manage human resources information systems?
- What strategies could be employed to enhance performance of health workers?
- What mechanism can be put in place to reduce the increasing cost of training in the public sector?
- How does the Government promote private sector investments in health care delivery especially in rural areas?
- How does the health sector meet HRH challenges from the implementation of the National Health Insurance Scheme?
- What strategies could be employed to promote better collaboration between MOH and Ministry of Education?
- How can HRH research be integrated into HRH functions?

- How can the health sector direct the integration of traditional and alternative medicine into the public health care delivery system?

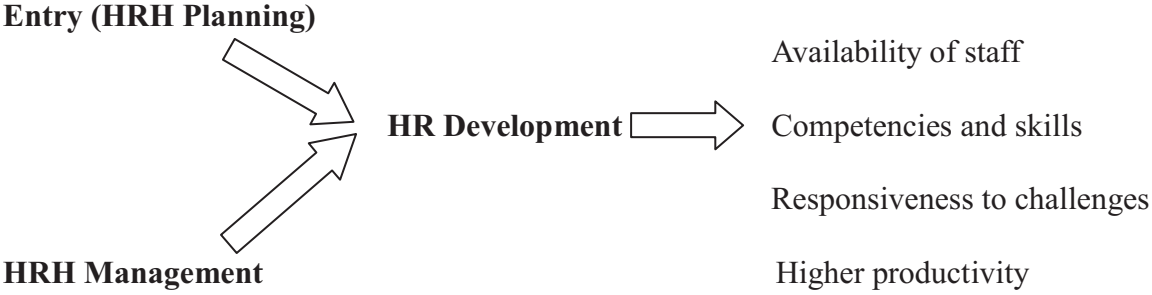
Six underlying principles that uphold the human resource policies for the five-year term are as follows:

1. Improving access to quality health care through rational production and equitable distribution of health personnel;
2. Focusing on health promotion, prevention of disease and regenerative health;
3. Using human resources to achieve the MDGs for health;
4. Providing equal opportunities in training, recruitment and deployment;
5. Creating an enabling environment for health personnel to function effectively; and
6. Preserving and maintaining ethical standards that will ensure clients and staff rights.

HRH Planning

The entry point of preparing workforce involves human resource planning, financing, education, recruitment and deployment. Human resource planning is important for effective and sustainable healthcare delivery. Human resources for health planning will take both a short- and long-term strategic perspective.

The policies have therefore been put into the model below.



Policy thrust: ***The MOH shall institutionalize comprehensive human resource plans that are relevant to all levels of the public and private health sectors, including traditional and alternative medicine, in the country***.

Strategies

- Develop human resource plans in the health sector at all levels (sub-district, district, regional and national) to address human resource needs.
- Update staffing norms, standards and skill mix at all levels of care (health centre, district hospitals, regional hospitals, specialized hospitals, teaching hospitals statutory bodies, CHAG, private sector, quasi-government hospitals and clinics).
- Institute regular monitoring mechanisms to assess the human resource situation for appropriate action.
- Map out and institutionalize minimum incentive package for health personnel at the various levels of care.

HRH Research Systems

Policy thrust: ***The MOH shall make research an integral part of human resource management and development at all levels and sectors.***

Strategies

- Establish a mechanism to identify and prioritize HRH issues for research.
- Develop capacity for research.
- Mobilize adequate budgetary allocation for human resource research and development.
- Establish a mechanism to document and disseminate research findings and best practices for human resource management and development.

HRH Information Systems

Policy thrust: ***The MOH shall strengthen the existing human resource information systems at all levels in the public and private sectors to reflect accurate data on all personnel.***

Strategies

- Develop or upgrade infrastructure for information systems at all levels.
- Build local capacity for human resource information systems.
- Mobilize adequate funds for information technology hardware, software and network.
- Update and upgrade the human resource records management system.
- Establish a mechanism for harmonizing HRH classifications.

Complementary Health Care

Policy Thrust: ***The MOH shall institutionalize accredited, research-based, traditional, herbal, complementary, and alternative medicine and regenerative health care into mainstream health care delivery***.

Strategies

- Develop framework for integration of complementary health care into mainstream health care delivery.
- Build local capacity for complementary health care.
- Mobilize adequate funds for and resources for the integration.
- Update health workers on the role of the new cadres.
- Establish a mechanism for harmonizing the integration.

HRH Financing

Policy thrust: ***The MOH shall provide adequate funds for human resource functions.***

Strategies

- Advocate for adequate funds from the Ministry of Finance to support human resource activities.
- Explore other sources of funding for human resource activities.

HRH Education, Training and Development

Policy thrust: ***The MOH shall maintain a reasonable balance in terms of numbers, diversity and competencies of HRH and provide adequate resources to support training.***

Strategies

- Effectively coordinate the activities of health training institutions in the country.
- Select and admit appropriate numbers of students into various health training institutions in accordance with requirements.
- Establish new training institutions and programs for the specialist cadres.
- Increase numbers of health post-graduate training institutions.
- Expand training institutions and provide necessary equipment, logistics and the requisite training programs to meet accreditation standards.
- Expand practical training sites and train more preceptors for effective practical training in the schools.
- Promote the establishment of other forms of training such as sandwich, distance learning and e-learning.

Capacity at Training Institutions

Policy thrust: ***The MOH shall recruit and develop the capacities of adequate numbers of health tutors.***

Strategies

- Encourage more people to opt for training as tutors.
- Allocate more fellowship awards for the training of health tutors.
- Institute a research and book allowance scheme to enhance the capacities of health tutors.
- Enforce equitable distribution of health tutors.

Admission and Selection Procedures

Policy thrust: ***Admission criteria and selection procedures into MOH training institutions shall reflect national and community needs.***

Strategies

- Collaborate with other MDAs in the selection and training of qualified and adequate numbers of various health professionals to meet community needs.
- Involve District Assemblies in the selection of candidates for training.

Financing the Cost of Training Health Workers
Policy thrust: ***The MOH shall institute measures to reduce cost of training in health training institutions.***

Strategies
- Introduce fee paying with the ultimate aim of full fee for courses in health training institutions.
- Introduce student loan schemes.
- Encourage state and local government scholarships and bursaries for very bright but needy students.
- Encourage the private sector to support health worker training.

Training of Mid-level Health Workers
Policy thrust: ***The MOH shall extend the training of mid-level health workers to include all categories of health professionals to ensure adequate skill mix for improved performance.***

Strategies
- Encourage the private sector to participate in the training of the mid-level cadre.
- Train mid-level cadre based on local needs.
- Ensure that the regulation of these cadres is by the appropriate professional council.
- Provide mid-level cadre training for all categories of health professionals.

Bonding of MOH Sponsored Trainees
Policy thrust: ***The MOH shall bond trainees who benefit from its sponsorship.***

Strategies
- Bond trainees according to the cost of their training.
- Review bond schemes periodically to reflect the prevailing situation.

De-boardinazation of MOH Training Schools
Policy thrust: ***The MOH shall institutionalize non-residential facilities for health training institutions.***

Strategies
- Encourage trainees from communities where training institutions are located to be non-residential.
- Encourage private sector to put up hostels near health training institutions.

Internship for Newly Trained Health Professionals
Policy Thrust: ***The MOH shall ensure that all newly trained health professionals undergo internships before being inducted into their professions.***

Strategies

- Maintain the current two-year houseman ship for medical doctors.
- Implement the proposed two-year rotation for nurses.
- Ensure that adequate facilities like accommodation and equipment are provided during internship.
- Decentralize internship to regional and district accredited facilities.
- Build capacities for institutions and facilities to enable them to supervise interns.

Accreditation of Training Institutions

Policy Thrust: ***The MOH shall ensure that all its tertiary institutions are properly accredited.***

Strategies

- Review and update training curricula periodically with appropriate accreditation bodies.
- Support regulatory bodies to perform their functions.
- Regulatory bodies shall periodically ensure that standards of training institutions are maintained.
- Set up boards of governors to serve as advisory bodies for the schools.

Partnership in Training

Policy Thrust: ***The MOH shall maintain closer collaboration with private sector institutions that train health professionals.***

Strategies

- Involve stakeholders in the development and review of program curricula.
- Influence intake levels of professions to reflect national needs and requirements.
- Provide technical support and other resources where appropriate.
- Ensure high standards of professional conduct.

Continuing Professional Education (Fellowships)

Policy Thrust: ***The MOH shall ensure that post-graduate training is highly localized and strongly favour staff in deprived areas, deprived institutions and priority areas.***

Strategies

- Reduce percentage coverage for external fellowships to cover courses that are not available locally.
- Allocate fellowships' awards to conform to annual fellowship plans agreed on by the central fellowship committee.
- Ensure equity in the distribution of awards.
- Award fellowships based on nominations submitted by heads of agencies and institutions.
- Institute bonds for all fellowships' awardees.

- Award fellowships to staff that are qualified under the fellowships guidelines.
- Abolish stipends given to local fellowship awardees.
- Support the Ghana College of Physicians and Surgeons adequately to increase post-graduate training.

In-service Training

Policy Thrust: ***All agencies of the MOH shall implement in-service training policies to reflect their local needs.***

Strategies

- Source funding for in-service training programs.
- Facilitate and expand HIST program to cover clinical, public health, management and other relevant areas.
- Build capacities for in-service co-ordinators and trainers.

Staff Orientation

Policy Thrust: ***All sectors of health care delivery shall orientate new employees and employees whose roles have changed.***

Strategies

Provide guidelines for staff orientation for adoption by the various sectors and monitor its implementation.

HRH Management

Staff shortages in the health sector are further compounded by maldistribution with a skew more towards urban facilities than rural, and unskilled staff versus skilled. Skills needed to function effectively in some positions are often lacking resulting in job and qualification mismatch. These factors have contributed to ineffectiveness and sometimes compromise quality of health care services to meet clients' expectations. This calls for clear guidelines and supportive mechanisms for equitable distribution and rational utilization of available HRH.

Policy Thrust: ***The MOH shall strengthen human resource management systems that are relevant to all levels and sectors of health in the country.***

Strategies

- Strengthen HRH directorates and units with human resource managers and officers at all levels and sectors.
- Build capacity for human managers and officers at all levels.
- Disseminate policies and guidelines on human resource management functions to all human resource directorates, sectors and units.
- Provide technical support to all directorates, sectors and units.
- Ensure that systems are instituted to facilitate monitoring of human resource functions at all levels, especially the private sector.

Recruitment

Policy thrust: ***The MOH shall institute mechanisms to improve recruitment processes among its agencies.***

Strategies

- Ensure that processes involved in recruitment are simplified.
- Empower regions and teaching hospitals to recruit staff with approval from the Minister of Health through heads of agencies.
- Institute a framework for agencies to submit their recruitment needs for approval by the MOH every year.
- Promote standardization of appropriate placement of all appointments with equal qualifications and jobs in all agencies.

Deployment/Distribution

Policy Thrust: ***The MOH shall ensure equitable distribution of health professionals in the health sector.***

Strategies

- Redistribute health professionals and support staff within the country based on local health needs and staffing norms.
- Policies from agencies on deployment of staff shall favour rural and deprived areas.
- Institute a two-year, compulsory, post-graduation deployment to rural area schemes for health workers

- Ensure that health workers are rotated between peripheral health centres, hospital-based posts and agencies where appropriate.

Decentralization of Human Resource Functions and Personnel Emolument Vote
Policy Thrust: ***The MOH shall improve upon the decentralization of human resource management and facilitate the decentralization of personnel emolument.***

Strategies
- Strengthen the management structures and systems in the peripheries to promote good human resource practices.
- Develop human resource capacity and provide technical support to the various levels.
- Provide HRH operational policies and guidelines at the peripheries.
- Facilitate the decentralization of salaries and other allowances to the budget and management centres in phases.

Performance Management
Policy Thrust: ***The MOH shall institute a comprehensive performance management system in all sectors of health care delivery.***

Strategies
- Review the existing performance appraisal system to suit the needs of the entire health sector.
- Monitor performance of directors and managers regularly at all levels in all sectors.
- Appraise staff at least bi-annually.
- Institute reward schemes according to performance.
- Promote active/applied research by all practicing health professionals.

Promotions
Policy thrust: ***The MOH shall ensure fairness in promotions for all categories of*** staff.

Strategies
- Provide guidelines for promotion of staff for adoption by all agencies and sectors.
- Ensure that the number of years required to be eligible for promotion is reduced by one year for personnel working in "officially designated" deprived areas.
- Standardize promotions in all agencies and sectors to prevent competition.

General Compensation, Benefit and Support Schemes
Policy thrust: ***The MOH shall institute general compensation and benefit schemes as part of its efforts to motivate deserving individuals, groups, institutions and establishments.***

Strategies

- Ensure adequate and constant inflow of Government of Ghana (item 1 budget) on remunerations.
- Maintain the existing benefits and rewards schemes.
- Operationalize staff housing schemes in the agencies.

Support Schemes to Attract and Retain Staff in Deprived Areas

Policy thrust: ***The MOH shall continue with its deprived area incentive scheme to attract, retain and sustain staff in the peripheries.***

Strategies

- Provide a comprehensive incentive package.
- Provide child support for secondary education in Ghana for one child per staff member assuming that primary education is free.
- Discriminate fellowship allocations to favour those working in deprived areas and priority health programs.
- Reduce period for promotions by one year.
- Provide policies that would ensure that newly deployed staff spend not more than three years in deprived areas or otherwise.
- Monitor and abolish deprivation incentives as districts and subdistricts become more endowed.
- Maintain the existing benefits schemes and skew these to favour staff in deprived areas.
- Encourage teaching hospitals and regional hospitals to contribute to the deprived area support scheme through their internally generated funds.

Retention of Trained Staff

Policy thrust: ***The MOH shall institute measures to motivate and retain trained staff in all sectors.***

Strategies

- Provide clear career paths for progression and opportunities for professional development.
- Provide access to fellowships for eligible staff at all levels.
- Encourage, support and recognize essential non-clinical programs.
- Continue and expand existing benefits schemes for health staff.
- Improve working conditions and environment in facilities for efficient and effective service delivery.
- Expedite the implementation of performance related reward systems.

Managed Migration ("Brain Gain")

Policy thrust: ***The MOH shall encourage the in-migration of health professionals and improve the benefits of the out-migration of health professionals for "brain gain".***

Strategies

- Enter into bilateral agreements with potential beneficiary countries to establish framework for managed brain gain.
- Source investments to produce more skilled health workers.
- Encourage and facilitate health professionals abroad to practice in Ghana.
- Advocate for implementation of international standards on migration of skilled professionals.

Health and Safety at the Workplace

Policy thrust: ***The MOH shall provide guidelines on health and safety at work places in accordance to the 2004 Labour Law Act 651.***

Strategies

- Encourage all institutions to perform periodic medical examinations for all their staff.
- Disseminate guidelines on the management of injuries, accidents and infections at the workplace.
- Ensure safety at work by encouraging institutions to provide protective environments, clothing and equipment.
- Facilitate the registration of all health personnel with NHIS.
- Encourage institutions to provide appropriate infrastructure to ensure safety at the workplace and allow easy access for physically challenged employees.
- Train staff in the use of equipment to prevent accidents.

Scheme of Service

Policy thrust: ***The MOH shall provide a comprehensive and holistic scheme of service for all categories of staff to be adopted by all sectors.***

Strategies

- Develop and disseminate a scheme of service for all categories of staff.
- Establish and develop mechanisms to facilitate career progression and movement from one health agency to another.
- Ensure that adequate arrangements exist to replace staff in service that are on study or sick leave so that services are not interrupted.
- Facilitate the establishment of a clear career pathway that recognizes academia for health tutors.

Job Description

Policy thrust: ***The MOH shall facilitate the development of specific job descriptions that match with worker remuneration for all health employees.***

Strategies

- Provide framework for agencies to develop job descriptions for their staff.
- Ensure that remuneration and allowances are based on job evaluations.
- Ensure that staff operations are in accordance with their job requirements.

Pensions and Retirements
Policy thrust: ***The MOH shall extend the retirement age for health workers and institute plans to prepare staff due for pension.***

Strategies
- Appraise the need for increasing the retirement age of critical health workers from 60 years to 65 years.
- Institute a four-year term of office for directors including principals of health training instructions.
- Maintain policy on contracts for some essential staff (doctors, nurses, pharmacists, medical assistants, laboratory technologists and technicians, etc.).

Regulation, Standards and Legislation
Policy thrust: ***The MOH shall promote professional standards and ethics for all staff in all sectors and ensure that appropriate legislations are adhered to.***

Strategies
- Define and communicate clearly roles, mandates and responsibilities of various regulatory bodies.
- Involve professional and other health staff associations in educating and promoting professional standards and code of ethics.
- Enforce ethical professional conduct among health workers through appropriate measures and sanctions.
- Work in accordance with the labour law.

Rights of Health Professionals and Clients
Policy thrust: ***The MOH shall ensure that rights of health professionals and clients are upheld and protected.***

Strategies
- Ensure that agencies and institutions update, disseminate and enforce clients and staff charters.
- Ensure that agencies and institutions have effective management systems for dealing with client and staff grievances.
- Promote advocacy to educate clients and staff on the respective charters.
- Ensure that health workers are adequately protected and trained in relation to occupational health hazards.

Collaboration between Health Sector Workers and Wor kers in Other Sectors
Policy thrust: ***The MOH shall provide a framework to ensure higher collaboration between health workers and workers in other sectors to enhance health care delivery.***

Strategies

- Facilitate communication between all health care providers and workers in other sectors.
- Harmonize areas of common service activities and responsibilities.
- Identify and work with civil society, households and communities.
- Facilitate the training of personnel involved in health from other sector ministries, e.g., the training of health extension officers by the Ministry of Manpower, Youth and Employment.

Implementation Plan

Appropriate planning and management of HRH at all levels of policy making and implementation is key to ensuring that the Ghanaian public has access to quality health care within this five-year framework. Table 24 provides a summary of all the planned activities in support of human resources and estimates on the budget requirements necessary to implement them. The proposed plan is for both short-term and medium-term actions.

Key Results Areas
• Increased availability of essential staff at all levels;
• Enhanced competencies and skills; and
• Improved client focus and workforce productivity.

Critical Success Factors

The success of the action plan solely depends on the commitment of all stakeholders involved through a collaborative approach. The critical success factors underpinning the commitment are:

- Appropriate stakeholder engagements: multi-sector contributions including NGO patient groups, professional associations and volunteers;
- Commitment by government to support actions which contribute to a sustainable health workforce;
- Clear understanding of roles, responsibilities and accountability;
- Adequate resource allocation;
- Initiatives outlined in this document are country-led (and not donor driven);
- Change management; and
- HRH strategies should be in harmony with other components of the health system.

Budget Estimates

The strategies and programs under this medium-term framework will have to be adequately supported in terms of technical, material and financial resources at all levels. The capacity of many executing agencies is currently very weak and will require resource building and strengthening.

Table 24: Implementation Plan and Schedule for 2007-2011

Objective 1: To train and deploy professionals with requisite human resource skill mix				
Activity	**Responsible**	**Those Involved**	**Period**	**Expected Outcome**
Evaluate the implementation of new programs and role of new providers and implement necessary changes	MOH	Training institutions, regulatory bodies, implementing agencies, client groups	3-5 years	Increased satisfaction of clients and providers
Examine challenges and opportunities related to scope of practice of various provider groups	MOH, Regulatory Bodies	Training institutions, relevant agencies, institutions, trainees	1-5 years	Greater efficiency in recruiting HRH to ensure appropriate mix and mobility
Engage employers, regulators, educators, agencies and unions in planning for the numbers, mix, competencies and skills of providers	MOH	Employers, regulatory bodies, training institutions, professional groups, relevant agencies,	1-5 years	
Collaborate with appropriate bodies in reviewing curricula and designing models for training	Regulatory bodies	Training institutions, private sector, other agencies, clients groups	1-5 years	Improved quality of training
Objective 2: To integrate non-allopathic providers (herbalists, regenerative health and alternative medical practitioners) into service delivery				
Establish at least ten traditional medicine and regenerative units in public health institutions annually	MOH/ TAMD	GHS, regulatory agencies	1-5 years	Availability and access to quality TM services
Establish four satellite centres for research and clinical trials	CSRPM	Research institutions, private sector	2-5yrs	Improved quality of TM services
Establish the post of medical herbalist in public service	MOH/ TAMD	MOH/HRH, regulatory bodies	1-3	Increased access to TM services
Accredit two TM /complementary alternative medicine sites in each district	Regulatory bodies/ TMPC/ MOH	Regional health directorate, CSRPM FDB	1-5 years	Improved access to quality TM services
Collaborate with universities to expand postgraduate studies in TM for health professionals	HRHD/ TMPC	Universities, CSRPM	1-5 years	
Objective 3: To generate evidence for health workers and client satisfaction				
Plan and execute appropriate research on health workers satisfaction	Agencies	All agencies	1-5 years	Satisfied health work force
Plan and execute appropriate research on clients satisfaction	Agencies	All agencies, client groups	1-5 years	Clients' needs met
Strengthen quality assurance units in all facilities	Agencies	All institutions	1-5 years	Improved quality of service

Objective 4: To increase production of health workers focusing on mid-level cadres				
Activity	**Responsible**	**Those Involved**	**Period**	**Expected Outcome**
Expand existing training schools	MOH	Regulatory bodies, training institutions	1-5 years	Increased numbers of mid- level health workforce to ensure appropriate skill mix
Establish new health assistants schools (lab, physiotherapy, medical, nursing)	MOH/ regulatory bodies,	Training institutions, agencies	1-5 years	
Establish new specialized training for health workers	MOH/ regulatory bodies,	Training institutions, agencies	1-5 years	
Collaborate with the private sector to expand pre-service	MOH/ regulatory bodies	Training institutions, private sector, agencies	1-5 years	
Objective 5: To increase home and community based care components of existing programs like HIV/AIDS, Roll Back Malaria and Community IMCI				
Involve communities involved in health service delivery programs	GHS	MLGRD, NGOs, communities, traditional authorities	1-5 years	Community ownership of health service delivery. programs
Encourage more volunteerism in health service delivery	GHS	District assemblies, agencies, NGOs, traditional rulers	1-5 years	Increased volunteerism in health service delivery in communities
Objective 6: To ensure multi-stakeholder involvement in HRH				
Expand existing human resource task team into a consultative/observatory group	MOH	MMY&E, agencies, MOF&EP, MOE, regulatory bodies, partners, PSC	1-5 years	HRH planning becoming inclusive
Objective 7: To mainstream gender into service delivery				
To disseminate gender policy	PPME/ MOH	All agencies	1-5 years	Improved equal gender representation through equal opportunities
Implement gender policy	All agencies	Institutions	1-5 years	
Objective 8: To ensure continuing professional development of health workers				
Establish structured continuing development for all levels of health cadres	MOH/ HRHD	All agencies, universities, regulatory bodies, training institutions	1-5 years	Improved skills of health workers
Develop framework for concession admission for exceptional paramedics to join other professional training programs	MOH/ HRHD	Universities, regulatory bodies, training institutions	1-5 years	Career opportunities expanded for exceptional work

Objective 9: To implement and sustain comprehensive conditions of service for all health workers				
Activity	**Responsible**	**Those Involved**	**Period**	**Expected Outcome**
Constitute a team that will negotiate a Condition of Service for staff	MOH	All agencies	1 -5 years	Improved conditions of service for all health workers
Evaluate current salary regimes	MOH	All agencies	1 -2 years	
Strengthen incentive schemes	MOH/ Agencies	All agencies	1-5 years	Improved worker motivation
Objective 10: To improve and decentralize HRH management functions				
Pilot decentralization of human resources and PE vote in three regions	MPSR	MOH/agencies, District Assemblies, CAGD	1-2 years	HRH functions decentralized
Extend decentralization of human resources and PE vote to three more regions.	MPSR	All agencies CAGD	3-5 years	
Strengthen capacity of staff to manage decentralization	Agencies	Agencies CAGD	1-5 years	
Objective 11: To improve performance management with corresponding rewards and sanctions systems for increase productivity				
Review current appraisal system	MOH/ HRHD	Agencies	1-2 years	Improved staff productivity and quality of service
Develop a framework to link rewards and sanctions to performance	MOH/ Regulatory bodies	All agencies, Public Service Commission, Attorney General Department	1-2 years	
Operationalize performance contract	MOH/ agencies	Institutions	1-5 years	
Objective 12: To promote and enforce effective legislation and regulation				
Review all policies related to staff-client relations	MOH/ Regulatory bodies	Health practitioners, Attorney General's Department	1-2 years	All policies related to staff-client relations reviewed
Decentralize functions of regulatory bodies at regional level (at least 5)	Regulatory bodies	Regional Health Directorate	1-5 years	Functions of regulatory bodies decentralized at regional level
Educate health practitioners and the general public on regulation	Regulatory bodies	Media, Health institutions, MOH	1-5 years	Health practitioners and the general public educated on regulation
Complete the review of health laws and legislative instruments for regulation	MOH	Regulatory bodies, AG, training institutions, agencies	1-2 years	Review of health laws and legislative instruments for regulation completed

Activity	Responsible	Those Involved	Period	Expected Outcome
Strengthen and build capacity for emerging regulatory bodies	MOH	Regulatory bodies	1-5 years	Capacity for emerging regulatory bodies strengthened and built
Objective13: To implement strategies to retain health care providers				
Evaluate the existing retention strategies	MOH	Agencies, professional associations	1-2 years	Retention of staff improved
Maintenance of healthy work environments			1-2 years	Improved capacities to deliver services
Provision of appropriate equipment for health staff			3-5 years	Improved responsiveness
Objective 14: To implement strategies for equitable distribution of staff				
Conduct impact assessment on existing staff distribution strategies	HRHD	Agencies, training institutions	1-2 years	Impact assessment conducted
Educate managers/staff on existing policies on equitable distribution of staff	Agencies	Agencies, institutions	1-2 years	Managers/staff educated on existing policies on equitable distribution of staff
Enforce the implementation of existing policies on staff distribution	Agencies	Agencies, regional health institutions, training institutions		Implementation of existing policies on staff distribution enforced
Objective 15: To improve human resource information systems				
Streamline data collection systems	Agencies	Institutions	1-2 years	Data collection systems streamlined
Improve data storage systems	Agencies	Institutions	1-2 years	Data storage systems improved
Train staff in HRI use	Agencies	Institutions	1-5 years	Staff trained in HRI use
Streamline reporting and monitoring system	MOH, agencies	Institutions	1-5 years	Reporting and monitoring system streamlined
Objective 16: To improve on health and safety issues at work place				
Develop and disseminate occupational policy on occupational health and safety	MOH	Agencies	1-2 years	Occupational policy on occupational health and safety developed and disseminated
Implement workplace health and safety regulation	Agencies	Agencies, institutions	1-5 years	Workplace health and safety regulation implemented

Activity	Responsible	Those Involved	Period	Expected Outcome
Develop mechanisms to ensure sharing of best practices	MOH	Agencies, institutions	3-5 years	Illnesses and injuries related to workplace reduced
Objective 17: To reduce the financial burden of training on government				
Encourage the establishment of more private health training institutions	MOH	Private sector training institutions	1-2 years	Increase numbers trained
Introduce cost sharing mechanism in public health training institutions	MOH	Training institutions	3-5 years	

Costing

For costing of human resource plans and activities refer to separate document on costing of human resource plans and activities for 2007-2011.

Monitoring

Monitoring Framework
Routine Monitoring
HR Observatory

Monitoring Process
HR Observatory

Task Teams at National Level

- Will meet on quarterly basis and schedule quarterly support and supervisory visits
- National team to interact with regional teams
- Regional task teams to interact with district task teams
- Other external monitoring teams (outside Ghana) to support the process.

Annex 1: Health Sector Tables

Table 25: Health Facilities in Ghana 2006

	MOH Institutions								Quasi Gov't Inst.					CHAG		
Regions	**Regional Hosp.**	**District Hosp.**	**Health Centres**	**Teach Hosp.**	**MCH Centre**	**Leprosy/ Psych**	**Other Comm.-Initiated Clinics**	**Total**	**Univ. Hosp.**	**Milt Hosp**	**Police/ Prisons Hosp/Clinic**	**Others (Mines)**	**Total**	**Hosp**	**Clinic**	**Total**
Ashanti	1	20	85	1	21	2	9	**139**	1	1	3	6	**11**	14	33	**47**
Brong Ahafo	1	5	84		13	0	0	**103**	0	1	1	0	**2**	9	9	**18**
Central	1	6	39		14	2	26	**88**	1	0	2	1	**4**	3	7	**10**
Eastern	1	9	46		122	6	14	**198**	3	0	0	2	**5**	4	15	**19**
Greater Accra	1	3	29	1	13	2	14	**63**	1	2	3	4	**10**	2	3	**5**
Northern	1	6	73		9	0	9	**98**	0	2	0	0	**2**	3	18	**21**
Upper East	1	3	21		7	0	40	**72**	0	0	1	0	**1**	1	9	**10**
Upper West	1	3	41		5	0	0	**50**	0	0	0	0	**0**	2	15	**17**
Volta	1	10	141		48	1	4	**205**	0	1	0	0	**1**	6	11	**17**
Western		10	63		10	0	12	**95**	6	1	2	3	**12**	4	16	**20**
Total	10	75	622		262	13	128	**1,110**	12	8	12	16	**48**	48	136	**184**

Table 26: Health Facilities in Ghana 2006, continued

	Others			Private		
Regions	**Planned Parenthood Association of Ghana**	**Ghana Registered Midwives Association**	**Total**	**Hospital**	**Clinic**	**Total**
Ashanti	12	101	**113**	43	64	**107**
Brong Ahafo	3	46	**49**	4	6	**10**
Central	6	27	**33**	4	62	**66**
Eastern	10	47	**57**	5	23	**28**
Greater Accra	2	87	**89**	37	142	**179**
Northern	2	6	**8**	0	2	**2**
Upper East	0	2	**2**	1	11	**12**
Upper West	0	5	**5**	3	5	**8**
Volta	3	29	**32**	6	23	**29**
Western	4	51	**55**	11	25	**36**
Total	**42**	**401**	**443**	**114**	**363**	**477**

Table 27: Summary of Health Care Providers in the Health Sector

	GHS/MOH								CHAG			Trg. Inst's	Reg. Bodies	QUASI/ Other Public	Private /1	Subvt Org.	Total
	MOH/G HSHQ	Teaching Hosp.	Psy Hosp	Reg Hlth Dir'te	Reg Hosp	Dist. Hlth Dire	Dist. Hosp	Sub Dist	Hosp	Hlth. Cent.	Clin.						
Administrative Staff	52		3	52	16	42	37	24	63	-	5	13	61	104	543		**1,015**
Anesthetist Assistant	-		-	1	21	1	37	4	40	-	-	-	-	-	855		**959**
Blood Donor Organizer	1		-	3	25	1	10		1	-	-	-	-	-	-		**41**
Community Health Officer	14		-	60	9	239	34	116	6	-	-	13	-	-	56		**547**
Dental Technician/ Therapist	-		-	-	3	-	1	3	2	-	-	-	-	-	-		**9**
Director	7		-	7	-	-	-		1	-	-	-		-	23		**38**
Doctor	15		4	13	101	93	186	61	87	-	-	-	1	107	71		**739**
Doctor-Dental Surgeon	1		-	-	4	-	9	3	-	-	-	-	-	-	-		**17**
Doctor-Specialist	21		3	13	25	25	26	10	8	1	2	-	-	-	77		**211**
Environmental Health Officer	3		-	4	1	1	2	2	2	-	-	30	-	2692	336		**3,073**
Field Technician	3		-	28	6	170	56	261	10	1	3	-	-	-	-		**538**
Health Information Officer	20		6	38	52	38	99	68	51	1	2	1	-	-	-		**376**
Health Promotion Officer	8		-	7	-	2	1		9	-	1	1	-	-	43		**72**

Health Services Administrator	9		3	11	12	5	35	1	28	2	4	-	-	-	-		**110**
Laboratory Assistant	-		-	2	5	3	48	11	115	7	21	-	-	18	-		**230**
Laboratory Scientist	17		-	9	9	3	10	1	-	-	1	2	-	4	-		**56**
Laboratory Technologist	12		2	14	41	22	86	30	46	-	5	-	-	9	-		**267**
Medical Assistant	1		5	2	10	52	90	200	49	2	8	1	-	8	-		**428**
Community Health Nurses	-		8	2	30	574	327	1,789	139	8	32	8	-	8	315		**3,240**
Enrolled Nurse	-		163	3	402	141	927	634	304	3	31	4	-		-		**2,612**
Professional Nurse	22		223	83	760	331	1,545	766	767	24	94	203	15	255	1,198		**6,286**
Others	345		394	839	1,236	1,105	3,227	2,203	1,947	93	299	551	46	81	1,143		**13,509**
Pharmacist	17		4	22	34	19	68	22	12	-	1	-	34	21	-		**254**
Pharmacy Technician	-		9	7	70	42	246	111	91	2	13	-	-	-	-		**591**
Radiographer	-		-	-	5	-	1		1	-	1	-	-	-	-		**8**
Registered Midwife	-		8	4	257	219	811	819	307	3	24	4	-	54	-		**2,510**
Support Staff	113		10	102	43	106	105	54	77	4	11	37	-	-	-		**662**
Technical Officer	18		-	4	2	4	5	2	40	2	-	-	-	-	-		**77**
Technician	9		-	7	4	-	-	1	15	1	1	-	-	-	-		**38**
Occupational Therapist Asst.	-		22	-	-	-	-	-	-	-	-	-	-	-	-		**22**
Physiotherapist	-		-	-	7	1	3	-	6	-	-	-	-	4	-		**21**
Physiotherapist Assistant	-		-	-	2	2	1	-	2	-	-	-	-	-	-		**7**
Ward Assistant	-		123	8	185	199	600	537	994	21	214	3	-	-	-		**2,884**

	GHS/MOH								CHAG			Trg. Inst's	Reg. Bodies	QUASI/ Other Public	Private /1	Subvt Org.	Total
	MOH/G HSHQ	Teaching Hosp.	Psy Hosp	Reg Hlth Dir'te	Reg Hosp	Dist. Hlth Dire	Dist. Hosp	Sub Dist	Hosp	Hlth. Cent.	Clin.						
X-Ray Tech. Assistant	1		-	22	3	39	9	29	1	1	-	-	12	-	-		**117**
X-Ray Technician/ Technologist	2		3	17	10	40	11	12	-		-	-	5	-	-		**100**
TBA	-		-	-	-	-	-	-	-	-	-	-	367		-		**367**
Trad. Med. Pract.	-		-	-	-	-	-	-	-	-	-	-	-	-	-		**21,788**
Emergency Medical Tech.	183		-	-	-	-	-	-	-	-	-	-	-	-	-		**183**
Total	**894**		**990**	**1,348**	**3,416**	**3,453**	**8,712**	**7,753**	**5,261**	**176**	**774**	**871**	**157**	**3,749**	**4,660**		**64,002**

Table 28: Distribution of 2005 GHS Staff by Region

Staff Category	MOH/GHS HQRS	Region										Total
		Ashanti	Brong Ahafo	Eastern	Central	Greater Accra	Northern	Upper East	Upper West	Volta	Western	
Administrative Staff	52	19	8	20	20	30	28	3	8	31	20	**239**
Anesthetist Assistant		4	7	15	3	9	7	6	2	7	4	**64**
Blood Donor Organizer	1	5	3	4	4	2	4	4	5	3	5	**40**
Community Health Officer	14	73	68	55	46	31	46	41	28	39	44	**485**
Dental Technician/ Therapist			1			4	1			1		**7**
Director	7		1	1	1	1	1	1	1			**14**
Doctor	15	60	40	67	33	103	25	25	8	48	57	**481**
Doctor-Dental Surgeon	1	1	1	2	2	7					3	**17**
Doctor-Specialist	21	12	13	13	8	31	3	5	3	8	7	**124**
Environmental Health Officer	3	5	2		1	13	8	1		9	1	**43**
Field Technician	3	79	70	87	44	30	50	27	43	48	43	**524**
Health Information Officer	20	58	44	42	19	58	13	11	4	25	33	**327**
Health Promotion Officer	8	2	3		2	1	1	1	1			
Health Services Administrator	9	9	9	11	6	9	6	3	2	6	6	**76**
Laboratory Assistant		17	1	4	3	8	6	4	2	15	9	**69**
Laboratory Scientist	17	3	7	5	1	4	3	2	1	3	5	**51**
Laboratory Technician/ Technologist	12	17	19	28	14	44	10	13	14	18	24	**213**
Medical Assistant	1	66	34	29	39	55	34	21	15	29	38	**361**

Community Health		343	213	395	265	539	284	107	67	302	223	**2738**
Enrolled Nurse		168	142	466	201	535	150	73	41	261	237	**2274**
Professional Nurse	22	386	199	472	369	1105	341	232	129	363	315	**3933**
Others	345	1153	605	1546	1065	1378	640	396	374	1547	872	**9921**
Pharmacist	17	31	13	17	11	40	12	7	6	15	17	**186**
Pharmacy Technician		148	47	48	36	67	33	24	17	34	31	**485**
Radiographer				1	1	1	1			1	1	**6**
Registered Midwife		269	141	295	177	463	153	97	102	262	163	**2122**
Support Staff	113	81	42	49	43	63	31	23	25	50	51	**571**
Technical Officer-Others	18	3		1	2	2	6			3		**35**
Technician-Others	9	1	1	2	1	1	2			2	2	**21**
Occupational Therapist Asst.					8	14						**22**
Physiotherapist			1	2		2	2		1	2	1	**11**
Physiotherapist Assistant					2	1					2	**5**
Ward Assistant		362	316	73	266	132	94	54	55	107	196	**1655**
X-Ray Technical Assistant	1	3	11	13	8	12	5	2		7	12	**74**
X-Ray Technician/ Technologist	2	10	7	10	6	18	5	2	3	11	9	**83**
TBA												
Trad. Med. Pract.												
Total	**711**	**3,388**	**2,069**	**3,773**	**2,707**	**4,813**	**2,005**	**1,184**	**957**	**3,257**	**2,432**	**27,296**

Table 29: Distribution of 2005 CHAG Staff by Region

		Region										Total
	HQRS	Ashanti	Brong Ahafo	Eastern	Central	Greater Accra	Northern	Upper East	Upper West	Volta	Western	
Administrative Staff	2	13	15	4	5	4	4	4	7	15		**73**
Anesthetist Assistant		8	8	6	2	1	3	4	3	4	1	**40**
Blood Donor Organizer				1								**1**
Community Health Officer		2	1				2	1				**6**
Dental Technician/ Therapist		1							1			**2**
Director						1						**1**
Doctor		9	6	2	1	5				6		**29**
Doctor-Specialist	1	2	1	2	3	1		2				**12**
Environmental Health Officer			1				1					**2**
Field Technician		6	2		2		2	1			1	**14**
Health Information Officer		13	19	4	3		1	1	2	8	3	**54**
Health Promotion Officer		3	6							1		**10**
Health Services Administrator	1	8	6	6	3	2	1		1	6	1	**35**
Laboratory Assistant		37	25	21	14	1	13	5	6	16	5	**143**
Laboratory Scientist										1		**1**
Laboratory Technician/ Technologist		9	10	6	4	1	4	6		7	4	**51**
Medical Assistant		8	12	8	2	3	11	9	2	3	1	**59**
Community Health		13	30	36	29		15	14	3	23	16	**179**

		Region										Total
	HQRS	Ashanti	Brong Ahafo	Eastern	Central	Greater Accra	Northern	Upper East	Upper West	Volta	Western	
Enrolled Nurse		41	58	48	27	1	17	70	5	63	8	**338**
Professional Nurse		177	168	132	57	23	74	84	90	87	19	**911**
Others	10	528	473	282	168	30	184	179	141	313	132	**2440**
Pharmacist		3	4	4		1				1		**13**
Pharmacy Technician		31	21	16	3	2	6	12	2	8		**101**
Radiographer				1	1							**2**
Registered Midwife		70	69	34	19	2	10	34	27	60	9	**334**
Support Staff	2	27	23	7	4	1	6	10	8	10	4	**102**
Technical Officer-Others	1	3	2	22	4		4	3	1	3		**43**
Technician-Others		2	4		2	2	2	2	1	2		**17**
Physiotherapist			3	1	2							**6**
Physiotherapist Assistant			2									**2**
Ward Assistant		256	293	185	90	18	84	13	44	153	93	**1229**
X-Ray Technical Assistant		6	9	1	1		1	1	1	7	4	**31**
X-Ray Technician/ Technologist		4	2	2				2		1	1	**12**
TBA												
Trad. Med. Pract.												
EMT's												
Total	**17**	**1,282**	**1,276**	**831**	**444**	**99**	**445**	**457**	**345**	**800**	**302**	**6,298**

Table 30: Distribution of 2005 Teaching Hospitals Staff

Category	Ashanti Region	Greater Accra Region	Total
Administrative Staff	11	15	26
Anesthetist Assistant	24	2	26
Blood Donor Organizer	5	20	25
Community Health Officer	1	1	2
Dental Technician/Therapist	2	1	3
Dental Assistants	10		10
Director	5	1	6
Doctor	231	277	508
Doctor-Dental Surgeon	7	7	14
Doctor-Specialist	66	24	90
Environmental Health Officer	3		3
Field Technician	2		2
Health Information Officer	38	50	88
Health Services Administrator	12	9	21
Laboratory Assistant	3	4	7
Laboratory Scientist/Technologist	30	3	33
Laboratory Technicians	8	55	63
Medical Assistant	-	2	2
Community Health Nurse	5	1	6
Enrolled Nurse	135	209	344
Professional Nurse	336	682	1018
Others	9	948	957
Pharmacist	40	64	116
Pharmacy Technician	35	30	65
Dispensary Assistant	9		9
Radiographer	5	8	13

Registered Midwife	189	111	300
Support Staff	861	41	902
Technician-Others	-	4	12
Physiotherapist	4	6	10
Physiotherapist Assistant	3	15	18
Ward Assistant	320	3	323
X-Ray Technical Assistant	6	31	37
X-Ray Technician/Technologist	9	15	24
Optometrist/Optician	3	-	3
Nutrition Officer	2	-	2
Dieticians	2	-	2
TBA	-	-	-
Traditional Medicine Practitioner	-	-	-
Total	**2,347**	**2,639**	**5090**

Table 31: Age Distribution of Present Staff for MOH Training Institutions, Teaching Hospitals, GHS and CHAG

Staff Category	Absolute Numbers					Percentage (%)					Absolute Numbers					Percentage (%)				
	GHS										CHAG									
	<=40	41-50	51-60	>60	Total	<=40	41-50	51-60	>60	Total	<=40	41-50	51-60	>60	Total	<=40	41-50	51-60	>60	Total
Administrative Staff	83	36	96	11	**226**	36.7	15.9	42.5	4.9	**100.0**	22	26	24	1	**73**	30.1	35.6	32.9	1.4	**100**
Anesthetist Assistant	16	32	15	1	**64**	25.0	50.0	23.4	1.6	**100.0**	12	14	13	1	**40**	30.0	35.0	32.5	2.5	**100**
Blood Donor Organizer	24	6	10		**40**	60.0	15.0	25.0	-	**100.0**			1		**1**	-	-	100.0	-	**100**
Community Health Officer	177	171	112	12	**472**	37.5	36.2	23.7	2.5	**100.0**	2	3	1		**6**	33.3	50.0	16.7	-	**100**
Dental Technician/ Therapist	3	4			**7**	42.9	-	57.1	-	**100.0**	1	1			**2**	50.0	50.0	-	-	**100**

Staff Category	Absolute Numbers					Percentage (%)					Absolute Numbers					Percentage (%)				
	GHS										CHAG									
	<=40	41-50	51-60	>60	Total	<=40	41-50	51-60	>60	Total	<=40	41-50	51-60	>60	Total	<=40	41-50	51-60	>60	Total
Director		2	12		**14**	-	14.3	85.7	-	**100.0**		1			**1**	-	100.0	-	-	**100**
Doctor	223	192	61	5	**481**	46.4	39.9	12.7	1.0	**100.0**	16	5	6	2	**29**	55.2	17.2	20.7	6.9	**100**
Doctor-Dental Surgeon	7	7	3		**17**	41.2	41.2	17.6	-	**100.0**	1	4	5	2	**12**	8.3	33.3	41.7	16.7	**100**
Doctor-Specialist	3	70	50	1	**124**	2.4	56.5	40.3	0.8	**100.0**		2			**2**	-	100.0	-	-	**100**
Environmental Health Officer	2	8	3		**13**	15.4	61.5	23.1	-	**100.0**	9	5			**14**	64.3	35.7	-	-	**100**
Field Technician	114	225	178	7	**524**	21.8	42.9	34.0	1.3	**100.0**	27	14	12	1	**54**	50.0	25.9	22.2	1.9	**100**
Health Information Officer	47	113	152	14	**326**	14.4	34.7	46.6	4.3	**100.0**	2	4	4		**10**	20.0	40.0	40.0	-	**100**
Health Promotion Officer	4	8	6		**18**	22.2	44.4	33.3	-	**100.0**	10	11	11	3	**35**	28.6	31.4	31.4	8.6	**100**
Health Services Administrator	35	26	12	3	**76**	46.1	34.2	15.8	3.9	**100.0**	55	53	33	2	**143**	38.5	37.1	23.1	1.4	**100**
Laboratory Assistant	19	17	31	2	**69**	27.5	24.6	44.9	2.9	**100.0**		1			**1**	-	100.0	-	-	**100**
Laboratory Scientist	32	10	5	2	**49**	65.3	20.4	10.2	4.1	**100.0**	20	14	15	2	**51**	39.2	27.5	29.4	3.9	**100**
Laboratory Technician/ Technologist	148	42	21	2	**213**	69.5	19.7	9.9	0.9	**100.0**	3	21	31	4	**59**	5.1	35.6	52.5	6.8	**100**
Medical Assistant	20	120	193	27	**360**	5.6	33.3	53.6	7.5	**100.0**	61	103	13	2	**179**	34.1	57.5	7.3	1.1	**100**
Community Health	1455	1097	172	6	**2,730**	53.3	40.2	6.3	0.2	**100.0**	4	147	179	8	**338**	1.2	43.5	53.0	2.4	**100**
Enrolled Nurse	8	1040	1193	29	**2,270**	0.4	45.8	52.6	1.3	**100.0**	294	296	293	28	**911**	32.3	32.5	32.2	3.1	**100**
Professional Nurse	1473	1121	1058	78	**3,730**	39.5	30.1	28.4	2.1	**100.0**	821	965	592	62	**2440**	33.6	39.5	24.3	2.5	**100**
Others	2274	3969	2915	212	**9,370**	24.3	42.4	31.1	2.3	**100.0**	5	6	2		**13**	38.5	46.2	15.4	-	**100**

Staff Category	Absolute Numbers					Percentage (%)					Absolute Numbers					Percentage (%)				
	GHS										CHAG									
	<=40	41-50	51-60	>60	Total	<=40	41-50	51-60	>60	Total	<=40	41-50	51-60	>60	Total	<=40	41-50	51-60	>60	Total
Pharmacist	91	70	22	3	**186**	48.9	37.6	11.8	1.6	**100.0**	5				**5**	100.0	-	-	-	**100**
Pharmacy Technician	253	101	129	2	**485**	52.2	20.8	26.6	0.4	**100.0**	48	33	18	2	**101**	47.5	32.7	17.8	2.0	**100**
Radiographer	2	2	2		**6**	33.3	33.3	33.3	-	**100.0**	1		1		**2**	50.0	-	50.0	-	**100**
Registered Midwife	34	595	1440	49	**2,118**	1.6	28.1	68.0	2.3	**100.0**	12	144	173	5	**334**	3.6	43.1	51.8	1.5	**100**
Support Staff	262	165	104	3	**534**	49.1	30.9	19.5	0.6	**100.0**	60	31	11		**102**	58.8	30.4	10.8	-	**100**
Technical Officer- Others	2	4	29		**35**	5.7	11.4	82.9	-	**100.0**	10	22	11		**43**	23.3	51.2	25.6	-	**100**
Technician-Others	9	11	1		**21**	42.9	52.4	4.8	-	**100.0**	5	8	4		**17**	29.4	47.1	23.5	-	**100**
Occupational Therapist Assistant	8	2	11	1	**22**	36.4	9.1	50.0	4.5	**100.0**					**0**		-	-		-
Physiotherapist	6	1	4		**11**	54.5	9.1	36.4	-	**100.0**	1	1	4		**6**	16.7	16.7	66.7	-	**100**
Physiotherapist Assistant		3	2		**5**	-	60.0	40.0	-	**100.0**		1	1		**2**	-	50.0	50.0	-	**100**
Ward Assistant	547	784	312	9	**1,652**	33.1	47.5	18.9	0.5	**100.0**	438	592	180	19	**1229**	35.6	48.2	14.6	1.5	**100**
X-Ray Technical Assistant	2	23	42	7	**74**	2.7	31.1	56.8	9.5	**100.0**	15	7	9		**31**	48.4	22.6	29.0	-	**100**
X-Ray Technician/ Technologist	46	16	19	2	**83**	55.4	19.3	22.9	2.4	**100.0**	6	2	4		**12**	50.0	16.7	33.3	-	**100**
TBA										**100.0**										
Trad. Med. Pract.										**100.0**										
Total	**7429**	**10,089**	**8419**	**488**	**26,425**	**28.1**	**38.2**	**31.9**	**1.8**	**100.0**	**1,966**	**2,537**	**1,651**	**144**	**6,298**	**31.2**	**40.3**	**26.2**	**2.3**	**100**

Table 32: Age Distribution of Present Staff for MOH Training Inst itutions,Teaching Hospitals, GHS and CHAG continued d

Staff Category	Absolute Numbers					Percentage (%)					Absolute Numbers					Percentage (%)				
	MOH Training Institutions										Teaching Hospitals									
	<=40	41-50	51-60	>60	Total	<=40	41-50	51-60	>60	Total	<=40	41-50	51-60	>60	Total	<=40	41-50	51-60	>60	Total
Administrative Staff	3	1	8	1	**13**	23.1	7.7	61.5	7.7	**100.0**	9	3	11	1	**24**	37.5	12.5	45.8	4.2	**100**
Anesthetist Assistant					**-**	-	-	-	-	**-**	6	11	5		**22**	27.3	50.0	22.7	-	**100**
Blood Donor Organizer					**-**	-	-	-	-	**-**	11	4	7		**22**	50.0	18.2	31.8	-	**100**
Community Health Officer	5	8			**13**	38.5	61.5	-	-	**100.0**	5				**5**	100.0	-	-	-	**100**
Dental Technician/ Therapist					**-**	-	-	-	-	**-**	2	1			**3**	66.7	-	33.3	-	**100**
Director					**-**	-	-	-	-	**-**		1	2	1	**4**	**-**	25.0	50.0	25.0	**100**
Doctor					**-**	-	-	-	-	**-**	438	60	6		**504**	86.9	11.9	1.2	-	**100**
Doctor-Dental Surgeon					**-**	-	-	-	-	**-**	8	1			**9**	88.9	11.1	**-**	-	**100**
Doctor-Specialist					**-**	-	-	-	-	**-**	8	18	7	1	**34**	23.5	52.9	20.6	2.9	**100**
Environmental Health Officer	5	18	7		**30**	16.7	60.0	23.3	-	**100.0**		1			**1**	-	100.0	-	-	**100**
Field Technician					**-**	-	-	-	-	**-**			1		**1**	-	-	100.0	-	**100**
Health Information Officer	1				**1**	100.0	-	-	-	**100.0**	8	20	51	1	**80**	10.0	25.0	63.8	1.3	**100**
Health Promotion Officer		1			**1**	-	100.0	-	-	**100.0**					**-**	-	-	-	-	**-**
Health Services Administrator					**-**	-	-	-	-	**-**	17	2	1		**20**	85.0	10.0	-	5.0	**100**
Laboratory Assistant					**-**	-	-	-	-	**-**		4	4	1	**9**	-	44.4	44.4	11.1	**100**

	Absolute Numbers					Percentage (%)					Absolute Numbers					Percentage (%)				
Staff Category	**GHS**										**CHAG**									
	<=40	**41-50**	**51-60**	**>60**	**Total**	**<=40**	**41-50**	**51-60**	**>60**	**Total**	**<=40**	**41-50**	**51-60**	**>60**	**Total**	**<=40**	**41-50**	**51-60**	**>60**	**Total**
Laboratory Scientist	2				**2**	100.0	-	-	-	**100.0**	8	5	1		**14**	57.1	35.7	7.1	-	**100**
Laboratory Technician/ Technologist					**-**	-	-	-	-	**-**	43	27	3		**73**	58.9	37.0	4.1	-	**100**
Medical Assistant		1			**1**	-	-	100.0	-	**100.0**		2			**2**	-	100.0	-	-	**100**
Community Health nurse	5	2	1		**8**	62.5	25.0	12.5	-	**100.0**	1	1			**2**	50.0	50.0	-	-	**100**
Enrolled Nurse		1	3		**4**	-	25.0	75.0	-	**100.0**	1	162	161	2	**326**	0.3	49.7	49.4	0.6	**100**
Professional Nurse	72	83	44	4	**203**	35.5	40.9	21.7	2.0	**100.0**	366	309	268	4	**947**	38.6	32.6	28.3	0.4	**100**
Others	120	193	226	12	**551**	21.8	35.0	41.0	2.2	**100.0**	290	518	564	31	**1403**	20.7	36.9	40.2	2.2	**100**
Pharmacist					**-**	-	-	-	-	**-**	66	32	3		**101**	65.3	31.7	3.0	-	**100**
Pharmacy Technician					**-**	-	-	-	-	**-**	41	12	11		**64**	64.1	18.8	17.2	-	**100**
Radiographer					**-**	-	-	-	-	**-**	3	6	2		**11**	27.3	54.5	18.2	-	**100**
Registered Midwife		2	2		**4**	-	50.0	50.0	-	**100.0**	4	63	212	1	**280**	1.4	22.5	75.7	0.4	**100**
Support Staff	12	15	9	1	**37**	32.4	40.5	24.3	2.7	**100.0**	22	24	12	1	**59**	37.3	40.7	20.3	1.7	**100**
Technical Officer- Others					**-**		-	-	-	**-**	3	5	2		**10**	30.0	50.0	20.0	-	**100**
Technician- Others					**-**		-	-	-	**-**					**-**	-	-	-	-	**-**
Occupational Therapist Assistant					**-**		-	-	-	**-**					**-**	-	-	-	-	**-**
Physiotherapist					**-**		-	-	-	**-**	1	1	7		**9**	11.1	11.1	77.8	-	**100**

Staff Category	Absolute Numbers					Percentage (%)					Absolute Numbers					Percentage (%)				
	GHS										CHAG									
	<=40	41-50	51-60	>60	Total	<=40	41-50	51-60	>60	Total	<=40	41-50	51-60	>60	Total	<=40	41-50	51-60	>60	Total
Physiotherapist Assistant					-		-	-	-	-		8	10		18	-	44.4	55.6	-	100
Ward Assistant	1	2			3	33.3	66.7	-	-	100.0	201	19	15		235	85.5	8.1	6.4	-	100
X-Ray Technical Assistant					-	-	-	-	-	-	3	7	25	3	38	7.9	18.4	65.8	7.9	100
X-Ray Technician/ Technologist					-	-	-	-	-	-	17	5	4	2	28	60.7	17.9	14.3	7.1	100
TBA																				
Trad. Med. Pract.																				
Total	226	326	301	18	871	25.9	37.4	34.6	2.1	100.0	1,582	1,331	1,395	50	4,358	36.3	30.5	32.0	1.1	100

Table 33: Gender Distribution of Present Staff at MOH HQ, MOH Training Institutions, Teaching Hospitals and GHS & CHAG

Staff Category	Numbers			Percentage (%)			Numbers			Percentage (%)			Numbers			Percentage (%)		
	Headquarters						GHS						CHAG					
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Administrative Staff	37	15	52	71	29	100	123	51	174	71	29	100	47	26	73	64	36	100
Anesthetist Assistant	-	-	-	-	-	-	45	19	64	70	30	100	35	5	40	88	13	100
Blood Donor Organizer	1	-	1	100	-	100	18	21	39	46	54	100	1		1	100	-	100
Community Health Officer	14	-	14	100	-	100	347	111	458	76	24	100	6		6	100	-	100
Dental Technician/ Therapist	-	-	-	-	-	-	4	3	7	57	43	100	2		2	100	-	100
Director	6	1	7	86	14	100	7		7	100	-	100	1		1	100	-	100
Doctor	13	2	15	87	13	100	400	66	466	86	14	100	23	6	29	79	21	100
Doctor-Dental Surgeon	1		1	100	-	100	10	6	16	63	38	100			0	-	-	-

Staff Category	Numbers			Percentage (%)			Numbers			Percentage (%)			Numbers			Percentage (%)		
	Headquarters						GHS						CHAG					
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Doctor-Specialist	10	11	**21**	48	52	**100**	87	16	**103**	84	16	**100**	11	1	**12**	92	8	**100**
Environmental Health Officer	3		**3**	100	-	**100**	6	4	**10**	60	40	**100**	2		**2**	100	-	**100**
Field Technician	2	1	**3**	67	33	**100**	353	168	**521**	68	32	**100**	9	5	**14**	64	36	**100**
Health Information Officer	11	9	**20**	55	45	**100**	169	137	**306**	55	45	**100**	51	3	**54**	94	6	**100**
Health Promotion Officer	6	2	**8**	75	25	**100**	7	3	**10**	70	30	**100**	8	2	**10**	80	20	**100**
Health Services Administrator	9		**9**	100	-	**100**	60	7	**67**	90	10	**100**	30	5	**35**	86	14	**100**
Laboratory Assistant	-		**-**	-	-	**-**	59	10	**69**	86	14	**100**	124	19	**143**	87	13	**100**
Laboratory Scientist	11	6	**17**	65	35	**100**	28	4	**32**	88	13	**100**		1	**1**	-	100	**100**
Laboratory Technician/ Technologist	9	3	**12**	75	25	**100**	171	30	**201**	85	15	**100**	46	5	**51**	90	10	**100**
Medical Assistant	1		**11**	100	-	**100**	198	161	**359**	55	45	**100**	43	16	**59**	73	27	**100**
Community Health			**-**	-	-	**-**	50	2680	**2730**	2	98	**100**	14	165	**179**	8	92	**100**
Enrolled Nurse			**-**	-	-	**-**	336	1934	**2270**	15	85	**100**	121	217	**338**	36	64	**100**
Professional Nurse	2	20	**22**	9	91	**100**	621	3087	**3708**	17	83	**100**	277	634	**911**	30	70	**100**
Others	274	71	**345**	79	21	**100**	5538	3487	**9025**	61	39	**100**	1993	447	**2440**	82	18	**100**
Pharmacist	13	4	**17**	76	24	**100**	117	52	**169**	69	31	**100**	9	4	**13**	69	31	**100**
Pharmacy Technician			**-**	-	-	**-**	389	96	**485**	80	20	**100**	97	9	**106**	92	8	**100**
Radiographer			**-**	-	-	**-**	6		**6**	100	-	**100**	1	1	**2**	50	50	**100**
Registered Midwife			**-**	-	-	**-**	27	2091	**2118**	1	99	**100**	21	313	**334**	6	94	**100**
Support Staff	2	111	**113**	2	98	**100**	51	370	**421**	12	88	**100**	27	75	**102**	26	74	**100**
Technical Officer-Others	11	7	**18**	61	39	**100**	13	4	**17**	76	24	**100**	40	3	**43**	93	7	**100**
Technician-Others	8	1	**9**	89	11	**100**	12		**12**	100	-	**100**	15	2	**17**	88	12	**100**

Staff Category	Numbers			Percentage (%)			Numbers			Percentage (%)			Numbers			Percentage (%)		
	Headquarters						GHS						CHAG					
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Occupational Therapist Assistant			**-**	-	-	**-**	13	9	**22**	59	41	**100**			**0**	-	-	**-**
Physiotherapist			**-**	-	-	**-**	6	5	**11**	55	45	**100**	6		**6**	100	-	**100**
Physiotherapist Assistant			**-**	-	-	**-**	1	4	**5**	20	80	**100**	2		**2**	100	-	**100**
Ward Assistant			**-**	-	-	**-**	279	1373	**1652**	17	83	**100**	212	1017	**1229**	17	83	**100**
X-Ray Technical Assistant	1		**1**	100	-	**100**	64	9	**73**	88	12	**100**	29	2	**31**	94	6	**100**
X-Ray Technician/ Technologist	2		**2**	100	-	**100**	67	14	**81**	83	17	**100**	11	1	**12**	92	8	**100**
TBA																		
Trad. Med. Pract																		
Total	**447**	**264**	**711**	**63**	**37**	**100**	**9,682**	**16,032**	**25,714**	**38**	**62**	**100**	**3,314**	**2,984**	**6,298**	**53**	**47**	**100**

Table 34: Gender Distribution of Present Staff at MOH, MOH Training Institutions, Teaching Hospitals and GHS and CHAG, continued

Staff Category	Numbers			ercentage (%)			Numbers			Percentage (%)		
	Teaching Hospitals						MOH Training Institutions					
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Administrative Staff	18	6	**24**	75	25	**100**	7	6	**13**	54	46	**100**
Anesthetist Assistant	9	13	**22**	41	59	**100**	-	-	**-**	-	-	**-**
Blood Donor Organiser	13	9	**22**	59	41	**100**	-	-	**-**	-	-	**-**
Community Health Officer	5		**5**	100	-	**100**	12	1	**13**	92	8	**100**

Staff Category	Numbers			ercentage (%)			Numbers			Percentage (%)		
	Teaching Hospitals						MOH Training Institutions					
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Dental Technician/ Therapist	2	1	**3**	67	33	**100**	-	-	**-**	-	-	**-**
Director	4		**4**	100	-	**100**	-	-	**-**	-	-	**-**
Doctor	362	142	**504**	72	28	**100**	-	-	**-**	-	-	**-**
Doctor-Dental Surgeon	3	6	**9**	33	67	**100**	-	-	**-**	-	-	**-**
Doctor-Specialist	29	5	**34**	85	15	**100**	-	-	**-**	-	-	**-**
Environmental Health Officer	1		**1**	100	-	**100**	29	1	**30**	97	3	**100**
Field Technician	1		**1**	100	**-**	**100**	-	-	**-**	**-**	**-**	**-**
Health Information Officer	35	45	**80**	44	56	**100**	1	-	**1**	100	**-**	**100**
Health Promotion Officer			**0**	**-**	**-**	**-**	1	-	**1**	100	**-**	**100**
Health Services Administrator	15	5	**20**	75	25	**100**	-	-	**-**	**-**	**-**	**-**
Laboratory Assistant	7	2	**9**	78	22	**100**	-	-	**-**	-	-	**-**
Laboratory Scientist	11	3	**14**	79	21	**100**	2	-	**2**	100	-	**100**
Laboratory Technician/ Technologist	61	12	**73**	84	16	**100**	-	-	**-**	-	-	**-**
Medical Assistant		2	**2**	**-**	100	**100**	1	-	**1**	100	-	**100**
Community Health		2	**2**	**-**	100	**100**	-	8	**8**	-	100	**100**
Enrolled Nurse	18	308	**326**	6	94	**100**	-	4	**4**	-	100	**100**
Professional Nurse	59	888	**947**	6	94	**100**	41	162	**203**	20	80	**100**
Others	837	566	**1403**	60	40	**100**	280	271	**551**	51	49	**100**

Pharmacist	56	45	**101**	55	45	**100**	-	-	**-**	-	-	**-**
Pharmacy Technician	36	28	**64**	56	44	**100**	-	-	**-**	-	-	**-**
Radiographer	11		**11**	100	**-**	**-**	-	-	**-**	-	-	**-**
Registered Midwife	8	272	**280**	3	97	**100**	-	4	**4**	-	100	**100**
Support Staff	2	57	**59**	3	97	**100**	3	34	**37**	8	92	**100**
Technical Officer-Others			**0**	-	-	**-**	-	-	**-**	-	-	**-**
Technician-Others	10		**10**	100	-	**100**	-	-	**-**	-	-	**-**
Occupational Therapist Assistant			**0**	-	-	**-**	-	-	**-**	-	-	**-**
Physiotherapist	5	4	**9**	56	44	**100**	-	-	**-**	-	-	**-**
Physiotherapist Assistant	2	16	**18**	11	89	**100**	-	-	**-**	-	-	**-**
Ward Assistant	10	225	**235**	4	96	**100**	-	3	**3**	**-**	100	**100**
X-Ray Technical Assistant	25	13	**38**	66	34	**100**	-	-	**-**	**-**	**-**	**-**
X-Ray Technician/ Technologist	19	9	**28**	68	32	**100**	-	-	**-**	**-**	**-**	**-**
TBA												
Trad. Med. Pract												
Total	**1,674**	**2,684**	**4,358**	**38**	**62**	**100**	**377**	**494**	**871**	**43**	**57**	**100**

Table 35: Environmental Health Officers Under Ministry Of Local Government and Rural Development

Region	Public Health Engineers	Environmental Health Technologist	Environmental Health Officers	Environmental Health Assistants	Total
HQ	3	3	1	1	**8**
Ashanti Region	0	11	67	242	**320**
Brong Ahafo Region	0	4	56	184	**244**
Central Region	0	3	34	193	**229**
Eastern Region	0	5	65	283	**353**
Greater Accra Region	0	12	117	321	**450**
Northern Region	0	5	29	307	**341**
Upper East Region	0	2	21	116	**139**
Upper West Region	0	1	14	92	**107**
Volta Region	0	9	49	259	**317**
Western Region	0	5	42	182	**229**
Total	**3**	**60**	**495**	**2180**	**2737**

Source: MLG&RD

Table 36: Traditional Medicine Prac titioners by Gender and Region

Region	Male	Female	Total
HQ			
Ashanti Region	1770	1231	**3001**
Brong Ahafo Region	2069	885	**2954**
Central Region	1017	3106	**2089**
Eastern Region	1796	969	**2765**
Greater Accra Region	845	362	**1207**
Northern Region	1403	301	**1704**
Upper East Region	628	174	**802**
Upper West Region	464	302	**766**
Volta Region	2231	527	**2758**
Western Region	962	746	**1708**
Total	**13185**	**8603**	**21788**

Source: TAMP, MOH

Table 37: Traditional Birth Attendants by Gender and Region

Region	Male	Female	Total
HQ	-	-	-
Ashanti Region	6	176	**182**
Brong Ahafo Region	-	-	**-**
Central Region	-	31	**31**
Eastern Region	-	-	**-**
Greater Accra Region	1	7	**8**
Northern Region	16	44	**60**
Upper East Region	4	12	**16**
Upper West Region	1	2	**3**

Volta Region	-	-	**-**
Western Region	1	66	**67**
Total	**29**	**338**	**367**

Table 38: Emergency Medical Technicians by Region

Region	**Total**
HQ	
Ashanti Region	48
Brong Ahafo Region	-
Central Region	18
Eastern Region	38
Greater Accra Region	59
Northern Region	-
Upper East Region	-
Upper West Region	-
Volta Region	20
Western Region	-
Total	**183**

Source: GAS, MOH

Table 39: Hire Purchase Vehicles by Agency

Agency	**Number**	**%**
Reg. Health Directorates	105	9.7
Teaching Hospitals	165	15.2
MOH Hqts	16	1.5
GHS Hqts	41	3.8
Regulatory Bodies	18	1.7
Medicals Schools	38	3.5
Psychiatric Institutions	21	1.9
District Level	541	50.0
Private Medical and Dental Practitioners	137	12.7
Total	**1082**	**100**

Table 40: Hire Purchase Vehicles by Staff Category

Staff Category	Number	%
Medical Officers	235	24.9
Medical Assistants	59	6.2
Health Serv. Administrators	36	3.8
Pharmacists	62	6.6
Technologists	12	1.3
Technical Officers	45	4.8
Nurses	328	34.7
Health Edu. Officers	7	0.7
Lab. Technician	11	1.2
Entomologists	3	0.3
Physiotherapists	8	0.8
Dispensary Technicians	16	1.7
Dentist	3	0.3
Biostatistics	5	0.5
Accountancy	33	3.5
Medical Schools	33	3.5
Others	49	5.2
Total	**945**	**100**

Annex 2: Training of New Mid-level Cadre for the Health Sector

Priority Policy Intervention

A key recommendation made by the HR task team is that the sector needs to focus on the production of the appropriate cadres. The development of the mid-level health care cadre has been identified as the priority policy intervention to focus on within the short to medium term. It is known that the production of mid-level cadres will ensure adequate skill mix, reduce the wage bill of the health sector and ensure higher productivity.

Operational definition of mid-level cadre:
A mid-level cadre is the person trained to support the highly trained health professional and can manage most situations in the absence of the professional. The cadre, however, requires supervision in general. For example:

- Medical assistants
- Clinical assistants
- Community health nurses
- Allied health care assistants
- Environmental health assistants.

Operational definition of a professional:
Those who have been trained through standardized programs and have been certified by a professional regulatory body. They must have basic entry requirements and have completed a period of training.

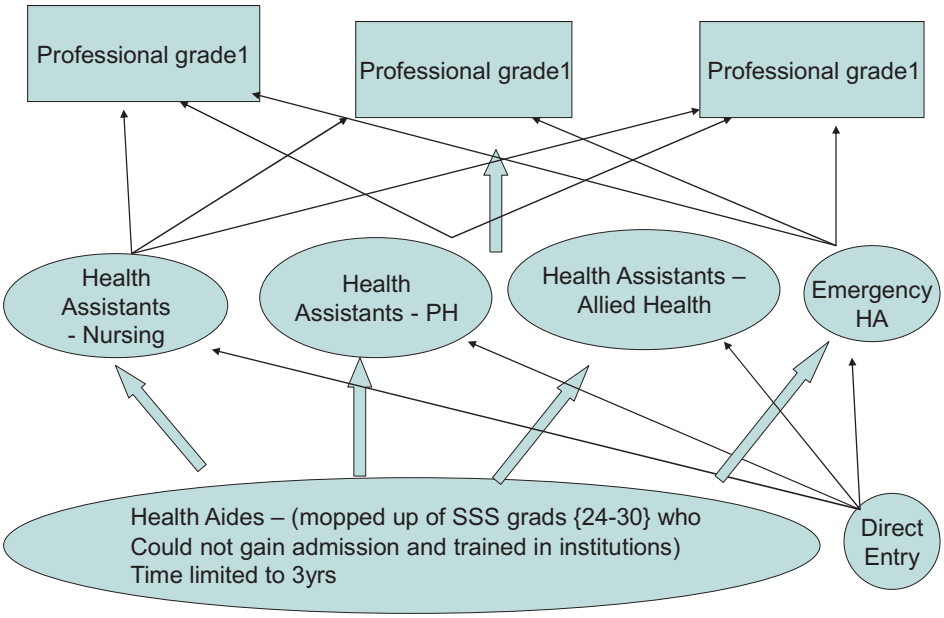
Role of professional groups
All professional groups without regulatory bodies should institute a regulatory body. Professional bodies that are being assisted by mid-level cadres should give proper recognition to the category of mid-level cadre.

Table 41: Category and Line of Supervision

Definition Level of Operation	Categories of Mid-level Officers	Supervising Authorities	Regulating Bodies – Existing and New
Physician Level	1. Medical Assistants 2. Physician Assistants 3. Nurse Practitioners	Doctors	MDC Eventually will have their own regulatory bodies
Nursing Level	1. Clinical Assistants 2. Reproductive Health Assistants 3. Community Health Nurses	Nurses	Nurses' and Midwives' Council
Technician Level (Allied Health)	1. Field Technical Assistants 2. Lab Technical Assistants 3. Technical Officers Nutrition 4. Imaging Technicians Assistants 5. Physiotherapy Assistants 6. Community Oral Health Technical Assistants 7. Prosthetics Assistant 8. Emergency Medical Assistants 9. Dental Clinic Assistants 10. Health Promotion Assistants 11. Environmental Health Assistants	Technical Officers	Allied Health

Pharmacy Level	1, Dispensing Technician	Pharmacist	Pharmacy Council
Auxiliary Staff	1. Health Aides 2. Volunteers		

Figure 14: Strategies for Rolling out the Mid-level Cadre



Specific Levels

Physician Level
Medical Assistant, Clinical Officer, Physician's Assistant

Purpose: To assist medical officers.

Location: At all facilities and are organizationally part of the medical team. Priority should be given to district and sub-district facilities.

Quantities: All health centres should be staffed by medical assistants, according to a proportion system determined by human resource plans and norms. Agencies will determine the norms and the MOH will determine the numbers to be trained based on need.

Qualifications: SSS aggregate 24 or better, followed by three years of formal training, plus a one-year internship, completing a diploma or certificate.

Selection and Sponsorship: To be based on needs as defined by number of facilities and sponsorships available. Numbers should be based on the District Health Plan and the National Human Resource Plan.

Sponsorship by Local Government: District Assembly sponsorship is based on district plans. Establish a quota system for the District Assemblies, local areas, traditional leaders, churches, NGOs and others.

Training Sites:

- Kintampo
- Fomena, medium to long term
- Development of other sites over the long term such as University of Development Studies and Cape Coast (advanced diploma, degree).

Regulation: To be conducted by MDC or the appropriate regulatory bodies.

Progression: There is the possibility to progress along career paths and, with additional qualifications, move into medical school. In the long term request a concession for shortened professional training for the cadre – all categories.

Tutors: Use the Kintampo model in the short to medium term for Fomena and other new sites to be developed.

Deboardinization: Encourage, when possible, day schools. Convert boarding houses into classrooms and other facilities in the long term.

Financing and Sponsorship:

- Government support
- Local sponsorship e.g. local government or faith based or Chieftainship
- Private sponsorship – fee paying
- Review allowances and feeding subsidies.

Bonding:

- Streamline the bonding systems for each cadre
- Build bonding according to total training cost-plus interest
- Bond sum is scaled down according to the years served
- Bond duration should be five years.

Nurse Level

Health Assistants (generic name for all categories), Health Assistant Clinical, Health Assistant Public Health

Location: Assist nurses in facilities and other locations, and in all cases health assistants are members of the nursing team. Based on needs of facilities and location.

Quantities: To be determined by human resource plans and norms. Agencies will determine the norms and the MOH will determine numbers to be trained based on needs.

Qualifications: SSS aggregate of 25-30, followed by two years of training that is completed with a certificate.

Selection and Sponsorship: To be based on needs as defined by number of facilities and sponsorships available. Numbers should be based on the District Health Plan and the National Human Resource Plan.

Sponsorship by Local Government: District Assembly sponsorsh ip is conducted based on district plans. Establish a quota system for the District Assemblies, local areas, traditional leaders, churches, NGOs and others.

Training Sites: Existing training schools will be used in the short term and new schools will be introduced in the medium to long term. Approved and accredited private schools with supervision from the Nurses' and Midwives' Council.

Regulation: By the NMC.

Progression: There is the possibility to progress along career paths and with additional qualifications move into nursing or other professional training schools. In the long term, request a concession for shortened professional training for the cadre (all categories).

Tutors: Use the existing tutors and preceptor in the regions. Encourage retired staff and train additional preceptors.

Deboardinization: Encourage, when possible, day schools. Convert boarding houses into classrooms and other facilities in the long term.

Financing and Sponsorship:

- Government support
- Local sponsorship e.g. local government or faith based or Chieftainship
- Private sponsorship – fee paying
- Review allowances and feeding subsidies.

Bonding:

- Streamline the bonding systems for each cadre
- Build bonding according to total training cost-plus interest
- Bond sum is scaled down according to the years served
- Bond duration should be three years.

Allied Level

Health Assistants (generic name for all categories), Health Assistants Lab, Health Assistants Physiotherapy, Health Assistants Imaging, Health Assistants Prosthetics and Orthortics, Health Assistants Oral Health, Environmental Assistants

Location: Assist Technical Officers in facilities and other locations. At all facilities, health assistants work under and are seen as part of the technician team. Assignments are based on the needs of facilities and location.

Quantities: To be determined by human resource plans and norms. Agencies will determine the norms and the MOH will determine numbers to be trained based on needs.

Qualification: SSS aggregate of 25-30, followed by two years of training that is completed with a certificate.

Selection and Sponsorship: Based on need as defined by number of facilities and sponsorship available. Should be based on the District Health Plan and HR Plan.

Sponsorship by Local Government: District Assembly sponsorship is based on district plans. Establish a quota system for the District Assemblies, local areas, traditional leaders, churches and NGOs.

Training Sites: Existing training schools will be used in the short term and new schools will be added in the medium to long term. Approved and accredited private schools with supervision from the relevant regulatory bodies. KATH, KBTH and Cape Coast Hospital to start developing training programs for Physiotherapy and accident and emergency. Explore the possibility of polytechnic schools offering specific courses.

Regulation: By the relevant regulatory bodies.

Progression: There is the possibility to progress along career paths and with additional qualifications move into appropriate professional training schools. In the long term, request a concession for shortened professional training for the cadre (all categories).

Tutors: Use the existing tutors and preceptors in the regions. Encourage retired staff to take up training. Train additional tutors and preceptors.

Deboardinization: Encourage, when possible, day schools. Convert boarding houses into classrooms and other facilities in the long term.

Financing and Sponsorship:

- Government support
- Local sponsorship, e.g. local government or faith based or Chieftainship
- Private sponsorship, fee paying
- Review allowances and feeding subsidies.

Bonding:

- Streamline the bonding systems for each cadre
- To be structured according to total training cost-plus interest
- Bond sum is scaled down according to the years served
- Bond duration should be three years.

Pharmacy Level
Health Assistants (generic name for all categories), Health Assistant Dispensing

Location: Assist pharmacists to provide services in facilities and other locations, e.g. pharmacy shops. At all facilities, health assistants work under and are seen as part of the pharmacy services. Numbers will be based on needs of facilities and location.

Quantities: To be determined by human resource plans and norms. Agencies will determine the norms and the MOH will determine the numbers to be trained based on needs.

Qualifications: SSS aggregate 25-30 followed by two years of structured modular training that is completed with a certificate.

Selection and Sponsorship: Based on need as defined by the number of facilities and sponsorship available. Both should be based on the District Health Plan and HR Plan.

Sponsorship: Short term to be sponsored by the government.
Local Government: District Assembly sponsorship based on district plans. Establish a quota system for the District Assemblies, local areas, and traditional local areas, traditional leaders, churches, NGOs.

Training Sites: Existing training schools should be used in the short term plus new schools in the medium to long term. Approved and accredited private schools will also be used with supervision from the relevant regulatory bodies. Explore the possibility of polytechnic schools offering more clinically oriented courses in this field.

Regulation: By the Pharmacy Council.

Progression: There is the possibility to progress along career paths and with additional qualifications move into appropriate professional training schools. In the long-term request a concession for shortened professional training for the cadre.

Tutors: Use the existing tutors and preceptors in the regions and encourage retired staff to take up training. Train additional tutors and preceptors.

Deboardinization: Encourage, when possible, day schools. Convert boarding houses into classrooms and other facilities in the long term.

Financing and Sponsorship:

- Government support
- Local Sponsorship e.g. local government or faith based or Chieftainship
- Private sponsorship – fee paying
- Review allowances and feeding subsidies.

Bonding:

- Streamline the bonding systems for the cadre
- To be structured according to total training cost-plus interest
- Bond sum is scaled down according to the years served
- Bond duration should be three years.

New and Emerging Categories
Health Assistants (generic name for all categories), Health Assistants Emergency

Location: Assist paramedics to provide emergency care on site, in ambulances, and in the facilities and other locations, e.g. emergency fire scenes. At all facilities, they work under and are seen as part of the emergency team. Based on needs of facilities and location.

Quantities: To be determined by human resource plans and norms. The agencies will determine the norms and the MOH will determine numbers to be trained based on needs.

Qualifications: SSS aggregate 25-30 followed by two years of structured modular training that is completed with a certificate.

Selection and Sponsorship: Based on need as defined by the number of facilities and sponsorship available. Should be based on the District Health Plan and HR Plan.

Sponsorship: Short term to be sponsored by government.
Local Government: District Assembly sponsorship based on district plans. Establish a quota system for the District Assemblies, local areas, and traditional local areas, traditional leaders, churches, NGOs.

Training Sites: Existing training schools will be used, including the Fire Academy Training School, in the short term, plus new schools (e.g. Fomena) in the medium to long term.

Approved and accredited private schools will be used with supervision from the relevant regulatory bodies. Hospitals will be developed as training sites. Explore possibility of private schools in the long term.

Progression: There is the possibility to progress along career paths and with additional qualifications move into appropriate professional training schools. In the long term request a concession for shortened professional training for the cadre (all categories).

Tutors: Use the existing tutors and preceptor in the regions. Encourage retired staff to take up training. Train additional tutors and preceptors.

Deboardinization: Encourage, when possible, day schools and convert boarding houses into classrooms and other facilities in the long term.

Financing and Sponsorship:

- Government support
- Local sponsorship e.g. local government or faith based/Chieftainship
- Private sponsorship, i.e. fee paying
- Review allowances and feeding subsidies.

Bonding:

- Streamline the bonding systems for each cadre
- According to total training cost-plus interest
- Bond sum is scaled down according to the years served
- Bond duration should be three years.

Constraints

Possible constraints that could serve as barriers to the implementation of the above policy interventions are:

- Professional protectionism
- Lack of political will
- Inadequate resources
- Inadequate number of tutors.

Opportunities

- The sector is facing a human resource crisis and this unfortunate situation should propel the sector into implementing the interventions identified with a focused commitment.
- There are already existing programs that the sector could learn lessons from.
- The country has an abundant human resource base that could be trained to help achieve the goals.

Annex 3: Bonding Scheme for Health Professionals

Table 42: Bonding For Sponsored Programs in the MOH

Duration	Program	Bond Duration	Training Cost ($)	Default in years (25% interest) $				
				1	2	3	4	5
1 year	(Post Basic) PHN, CCN, PON, MIDW, POH, NSG, MA	3 years	3,334	4,168	5,209	6,512	--	--
2 years	Certificate CHN, FT (Kintampo), SOH (Tamale/Ho), MIDW (Atibie, Hohoe, Mampong)	3 years	4,110	5,138	6,422	8,027	--	--
3 years	Diploma RGN, RMN, MIDW, SRN, TO (Kintampo), SOH (ACCRA), CHN	5 years	8,472	10,590	13,238	16,547	20,684	25,854
3 years	Radiologic Technology	5 years	8,468	10,585	13,231	16,539	20,674	25,842
3 years	Medical Laboratory Technology/MA	5 years	8,207	10,259	12,823	16,029	20,037	25,046
3 years	BA, BSc Nursing, BSc Medical Laboratory/Radiography	5 years	9,600	12,000	15,000	18,750	23,438	29,297
4 years	Pharmacy	5 years	18,748	23,435	29,294	36,617	45,771	57,214
5 years	Medicine	5 years	40,705	50,881	63,602	79,502	99,377	124,222
>1 year	External Fellowship	2 years	10,000	10,500	15,625	--	--	--
1 year	External Fellowship	3 years	25,000	31,250	39,063	--	--	--
1 year	Local Fellowship (MPH, MPHIL, MA HRM)	3 years	6,400	8,000	10,000	--	--	--
2 years	Local Fellowship (MPH, MPHIL, MA HRM)	3 years	12,800	16,000	20,000	40,000		--
1 year	Local Fellowship (SANDWICH, MA, HRM, HRD)	2 years	4,000	5,000	6,250	--	--	--

1 year	Local Fellowship (MA, Educational Administration)	2 years	3,000	3,750	4,688	--	--	--
2 years	Local Fellowship (Diploma Health Science Education)	3 years	3,500	4,375	5,469	6,836	--	--
3 years	Local Fellowship (Sandwich B.Ed., Health Science)	5 years	4,500	5,625	7,031	8,789	10,986	13,733
1 year	Local Fellowship (Postgraduate Diploma, Education)	3 years	2,000	2,500	3,125	3,906	--	--
2 years	External Fellowship	3 years	50,000	62,500	78,125	97,656	--	--