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HUMAN RESOURCES FOR HEALTH COUNTRY PROFILE MALAWI

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Acronyms

ART	Antiretroviral Therapy
ASFR	Age Specific Fertility Rate
CBR	Crude Birth Rate
CCT	Census Coordinating Team
CDC	Centers for Disease Control and Prevention
CDR	Crude Death Rate
CEZ	Central East Zone
CH	Central Hospital
CHAM	Christian Health Association of Malawi
CHSU	Community Health Sciences Unit
CIM	Centre for International Migration of ‘German Experts/Doctors’
CMED	Central Monitoring and Evaluation Division
CO	Clinical Officer
COM	College of Medicine
CPD	Continuous Professional Development
CSR	Centre for Social Research
CWZ	Central West Zone
DA	District Assembly
DALY	Disability Adjusted Life Years
DAPP	Development Aid from People to People
DFID	Department for International Development
DHIS	District Health Information System
DHMT	District Health Management Team
DHS	Demographic and Health Survey
DIPs	District Implementation Plans
DMO	District Medical Officer
DPSM	Department of Public Service Management
DHO	District Health Office(s)
EHP	Essential Health Package
EHRP	Emergency Human Resource Programme
FBO	Faith Based Organization
FR	Fertility Rate
GDP	Gross Domestic Product
GFATM	The Global Fund to Fight AIDS, Tuberculosis and Malaria
GIZ	Gesellschaft für Internationale Zusammenarbeit meaning <i>German International Cooperation</i>
HA	Health Assistant
HMIS	Health Management Information System
HRH	Human Resources for Health
HSA	Health Surveillance Assistant
HSC	Health Services Commission
HRTWG	Human Resource Technical Working Group
HTC	HIV Testing and Counseling
HTI	Health Training Institution
IT	Information Technology
IMR	Infant Mortality Rate

JCE	Junior Certificate of Education
JICA	Japan International Cooperation Agency
KCH	Kamuzu Central Hospital
KCN	Kamuzu College of Nursing
KFW	Kreditanstalt für Wiederaufbau meaning <i>Reconstruction Credit Institute</i>
MASM	Medical Aid Society of Malawi
MCM	Medical Council of Malawi
MA	Medical Assistant
M&E	Monitoring and Evaluation
MA	Medical Assistant
MCHS	Malawi College of Health Sciences
MGDS	Malawi Growth and Development Strategy
MDHS	Malawi Demographic and Health Survey
MICS	Multiple Indicators Cluster Survey
MMR	Maternal Mortality Ratio
MoH	Ministry of Health
MoLG	Ministry of Local Government
MOU	Memorandum of Understanding
MPSR	Malawi Public Service Regulations
MSCE	Malawi Schools Certificate of Education
N/MW	Nurse/Midwife
NAC	National AIDS Commission
NGO	Non-Governmental Organization
NMCM	Nurses and Midwives Council of Malawi
PMPB	Pharmacy, Medicines and Poisons Board
NSO	National Statistical Office
OPC	Office of the President and Cabinet
PoW	Programme of Work
PSI	Population Services International
PSLC	Primary School Leaving Certificate
QECH	Queen Elizabeth Central Hospital
TBA	Traditional Birth Attendant
SEZ	South East Zone
SLA	Service Level Agreements
SWAp	Sector Wide Approach
SWZ	South West Zone
TA	Technical Assistant/Assistance
TWG	Technical Working Group
UMR	Under Five Mortality Rate
UN	United Nations
UNFPA	United Nations Population Fund
UNICEF	United Nations Children’s Fund
UNDP	United Nations Development Programme
UNV	UN Volunteers
VSO	Voluntary Services Overseas
WHO	World Health Organization
WMS	Welfare Monitoring Survey

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Executive Summary

The Human Resource for Health (HRH) Malawi Country Profile is to serve as a tool for providing a comprehensive picture of the health workforce situation in Malawi. This has been achieved through the presentation of the current situation regarding health policies and management systems, the human resources management information system (HRMIS); and by providing the picture of previous and current stock of health workers in the country as a basis for baseline information on prevailing trends. The profile will therefore facilitate information sharing nationally and also for cross-country comparisons, especially in the Sub Saharan Africa, and contribute towards producing regional HRH country profiles.

The task of updating the HRH Malawi Profile was basically a cross-sectional desk study that adopted descriptive and analytical methodologies where both qualitative and quantitative data and information were compiled from available reports, studies and statistics related to HRH from public and private health sector stakeholders. Personal consultations, telephone interviews and field visits were also conducted with identified representatives from different stakeholders to fill in the HRH information gaps.

The establishment of a National HRH Observatory is currently strongly recommended to facilitate production, sharing and use of quantitative and qualitative information on HRH in order to support the development and implementation of the future HRH policies and plans. In future, one of the main activities of the National HRH Malawi Observatory will be to periodically update the HRH country profile. The current exercise of up-dating the HRH Malawi Country Profile is therefore a stop-gap measure in order to present a situational picture of the HRH in Malawi and facilitate a reasonable comparison of the HRH challenges and policy responses in Malawi with those of other countries in the region.

Since Malawi is still in the process of developing and establishing the proposed National HRH Observatory, some of the data and information were not readily available to fill all HRH gaps. However, a few important consultations with experienced professionals well versed with HRH issues and the HMIS, from the Central Monitoring and Evaluation Division (CMED), were done to provide realistic estimates to fill such gaps. These estimations were validated either by important HRH peers in the HRTWG or from key personnel from the MoH and the health sector fraternity in the country.

The Main Aim of the Country Profile

This HRH Malawi Country Profile is meant to be a reference document to provide the stakeholders in the health sector with the current HRH situation in Malawi. HRH country profiles, like this one, are designed to assist health sector managers, policy makers and implementers of the health delivery system in making decisions regarding HRH processes that may require statistical evidence on the current situation and trend of health workforce in the country. Specifically, the HRH Malawi Country Profile, will act as a tool for providing a comprehensive picture of the Health Workforce situation; systematically assist in presenting the HRH policies and management situation; help in monitoring the HRH stock and trends; and assist in providing the means for communication with and between policy-makers and stakeholders. The profile will therefore provide stakeholders in HRH with the platform for making available evidence-based HRH information for baseline purposes and for establishing trends and facilitating information sharing for cross-country comparisons.

Methodology

Like the previous HRH Country Profile, this document was compiled using desk reviews of primary and secondary data obtained from the various reports (e.g. the MoH/DFID EHRP Evaluation Report, 2010), and HRH documents within the Ministry of Health, Ministry of Finance, Ministry of Education, the Christian Health Association of Malawi (CHAM) and the three regulatory authorities, i.e. the Nurses and Midwives Council of Malawi, the Medical Council of Malawi and the Pharmacy and Medicines Board of Malawi.

The Health Delivery System in Malawi

The public health sector in Malawi includes the Ministry of Health said to provide about 60% of the health services (broken down to 57% direct by Government, and 3% by Ministry of Local Government, Malawi Defence Forces and Malawi Police Service), and the Christian Health Association of Malawi (CHAM) and the private practice sector said to be responsible for 40% of the health services.¹ The HRH Census 2008 identified ownership of health facilities as being 55.0% owned by Government, 14.0% by CHAM, 6.0% by NGOs, 20% by private for profit health delivery organizations, 1.0% by statutory organizations and 5.0% by private companies.

The HRH Situation in Malawi

In April 2004, the Ministry of Health in Malawi described the country's human resources situation as 'near collapse,' as low levels of health workers were overwhelmed by the demand for services resulting from population growth and high levels of HIV/AIDS, along with the advent of globalization which was fuelling the migration of nurses and doctors out of the country.² The ratios of doctors and nurses to population in Malawi were lower than those of its neighbouring Sub-Saharan African countries.³ At its core, the reasons for chronic HRH shortages in the country stemmed from an inability to plan for and invest in the production and retention of adequate numbers of health workers in the public sector.

During the years 2004 and 2009, Malawi with support from her cooperating partners/donors such as DFID and Global Fund, respectively, was implementing a 6 year Human Resource Emergency Plan and a 6 year Emergency Pre-service Training Plan as a way of addressing the HRH crisis. In order to address the low remuneration package within Malawi's health sector and consequently improve health workers' retention, the Government of Malawi, with support mainly from DFID, implemented a 52% salary top-up in April 2005 targeting 11 priority cadres. In addition to salary top-ups, the Ministry of Health had also approved the payment of both monetary and non-monetary incentive packages with the aim of attracting health workers to rural and hard to reach and underserved areas, which had been jointly identified by CHAM and MoH. However, the implementation of these measures was partial and ad hoc in nature and as such did not result into achieving the intended equitable distribution of health workers.

As a result, available evidence indicates that the country has increased the health workforce from a total of 33,470 to 33,766. For example, the evaluation report of Malawi's Emergency Human Resources Programme (EHRP) shows that there has been an increase in the number of professional health workers across the 11 priority cadres, where the total number of professional health workers increased by 53% from 5,453 in 2004 to 8,369 in 2009. The HRH Census Report (2008) showed that HSAs constituted 30% of all the staff working in the sector. Of these health workers, 5,328 (16%) were at work in the Northern

¹ MoH Health Sector Annual Report 2006-7, September, 2007

² Ministry of Health, Republic of Malawi: Human Resources in the Health Sector: Towards a Solution. Blantyre 2004.

³ WHO Global Health Atlas – An Interactive World Map. <http://atlas.globalhealth.org/>

Zone (NZ), 4,628 (14%), in the central East Zone (CEZ), 8,447 (25%) in the Central West Zone (CWZ), 7,341 (22%), in the South East Zone (SEZ), and 7,726 (23%) were at work in the South West Zone (SWZ).

The HRH Malawi Country Profile

This HRH Malawi Country Profile has therefore documented basic HRH stock and trends, shown imbalances in skill-mix, distribution and mobility of health workers; explained the HRH policies and management situation which help in monitoring the HRH stock and trends; described the system of communication with and between policy-makers and stakeholders; identified the existing HRH information system providing baseline information on trends; and has provided some tools for facilitating information sharing and cross-country comparisons.

The approach adopted in this document will therefore provide valuable data and information on HRH production and utilization, and information on management of performance of the health workforce, working conditions, legislation and regulation.

Introduction

An efficient and effective health-care delivery system largely depends on availability of “carefully planned, effectively trained, equitably distributed and optimally utilised” health workers. This, in practical terms, means the achievement of an optimal balance in employee numbers, skill-mix, staff distribution, deployment and career progression to enhance staff motivation, retention, performance and maximum productivity. To reach prime performance, all actors in HRH management must recognize and value the need to establish the availability and adequacy of the required skills for effective delivery of the national minimum health care package.⁴

Human Resources for Health refer to the people that make things happen in providing health care goods and services. They include all those persons employed by Government, Non-Governmental Organizations and the Private Sector in protection and improvement of health. From 2004 to 2009, Malawi with support from donors was implementing an Emergency Human Resource Programme (EHRP) and a 6-year Emergency Pre-service Training Plan as a way of addressing the HRH crisis. This was done in order to address the low remuneration package within Malawi’s health sector and consequently improve health workers’ retention.⁵

Currently, development of the Health Sector Strategic Plan, commonly known as the Program of Work (PoW) II, is being developed to replace the PoW I, which essentially expires in June 2011, the Ministry of Health with its cooperating partners are directing their efforts towards increasing the staffing levels in various facilities, improving training capacity for health training institutions to improve the quality and quantity of output as well as providing tools and an enabling environment for improved work performance. These efforts were further enhanced by the Global Health Workforce Alliance (GHWA) Kampala declaration (March 2008) that emphasized the need for collective and sustainable political, structural, systemic and economic interventions to check the global health workforce crisis.⁶

Purpose

The HRH Malawi Country Profile is a reference document to provide data and information on HRH situation in Malawi. It is designed to assist health sector managers and policy makers in taking decisions that may require statistical evidence on the current situation and trend of health workforce in the country. Specifically the purpose of the HRH Malawi Country Profile is to serve as a tool for:

- Providing a comprehensive picture of the health workforce situation, i.e. stock and trends;
- Systematically presenting the HRH policies and management situation to help monitor the HRH stock and trends;
- Providing a platform for communication with and between policy-makers and stakeholders;
- Strengthening the HRH information system by establishing evidence for baselines and trends; and
- Facilitating information sharing and cross-country comparisons.

Methodology

Like the previous HRH Country Profile on Malawi (2008), this document was compiled using primary and secondary data obtained from the various reports. These include, but not limited to the EHRP Evaluation Report (2010), HRH documents within the Ministry of Health, Ministry of Finance, Ministry of Education, the Christian Health Association of Malawi (CHAM) and the three regulatory authorities,

⁴ WHO, HRH Malawi Country Profile, 2008.

⁵ Ibid.

⁶ Ibid.

namely; Nurses and Midwives Council of Malawi, Medical Council of Malawi and Pharmacy, Medicines and Poisons Board. Data and information was collected mainly through desk reviews of the key Government documents in the line social sector Ministries, namely, Health, Local Government and Rural Development, Finance and Education. Other documents were sourced from the Office of the President and Cabinet (OPC) and studies such as those conducted by the College of Medicine of the University of Malawi.

Scope of the HRH profile

This profile covers the following areas:

- Country context with a geographical, demographic, and economic situation of the country;
- The country's health services system, its governance, policies and practices;
- A comprehensive picture of the Health Workforce situation in the Malawi;
- HRH production, including pre-service and post basic training processes showing human resource stock and trends;
- HRH utilization; and
- Governance in the health system.

1 Country Context

1.1 Geographical Features

1.1.1 Geographical Position

Malawi is a landlocked country in sub-Saharan Africa sharing boundaries with Zambia to the Northwest, Tanzania to the North and Northeast and Mozambique to the East, South and Southwest. It has an area of 118,484 square kilometres of which 94,276 square kilometres are land and a population of 13.1 million (Population and Housing Census, 2008). From North to South the country is 560 miles (896 kilometres) long and varies in width from 50 to 100 miles (80 to 160 kilometres). The country is divided into three regions namely; Northern, Central, and Southern Regions. There are 28 districts; six in the Northern Region, nine in the Central Region and thirteen in the Southern Region (see Map1 below). Administratively, the districts are subdivided into Traditional Authorities (T/As) presided over by chiefs. The Traditional Authorities are composed of villages and these are the smallest administrative units presided over by village headmen and headwomen.

Physically, Malawi is part of the Great Rift Valley of East and Central Africa: (the whole country from North to South is traversed by a deep trough between two parallel faults or cracks in the Earth's crust). Most of this trough is occupied by Lake Malawi. Malawi stretches on a plateau that stands between 3,000 and 4,000 feet above sea level. Both Lilongwe and Blantyre stand at about 3,500 feet above sea level. The Nyika Plateau in the North rises to over 8,000 feet. The Shire Highlands in the South have an elevation of about 2,500 feet, rising to the dramatic mountain masses of Mulanje (10,000 ft) and Zomba (7,000 ft).

1.1.2 Climatic Conditions

Malawi experiences Tropical Climate with three seasons namely, cool-cold and dry (May to mid-August); hot (mid-August to November); rainy (November to April) per year. The variable altitude of the country provides a wide difference in climate. The Lakeshore has longer hot seasons with higher humidity and the temperatures are at their hottest in the lower altitudes of the Shire Valley. The rains are more prolonged in the North. As a rule the temperature decreases and the rainfall increases with altitude. The weather begins to warm up in August/September. October and November are the hottest months. Temperatures reach 35°C in Lilongwe and as high as 40-42°C in the low lands Shire Valley and lakeshores. With the onset of the rains, which usually begin towards the end of November or the beginning of December, the temperatures fall a little, but the days are still hot and humid. The rains are heaviest in the first few months, diminishing in March. Humidity can be as much as 80% in the height of the rainy season and more on the lakeshore. It rains very occasionally during the two dry seasons but generally wet weather is very rare from May to October.

1.2 Demography

1.2.1 Total Population and Population Growth in Malawi

As early as 1994, the Malawi Government adopted the National Population Policy, which was designed to reduce population growth to a level compatible with Malawi's social and economic goals. The Policy's objectives of government are to improve family planning and health care programmes, to increase school enrolment with an emphasis on raising the proportion of female students to 50% of total enrolments, and to increase employment opportunities, particularly in the private sector (MDHS 2004).

The Census Report (2008) shows that the population had grown from 4,039,583 in 1966 to 13,077,160 in 2008, with an increase of 9 million. From 2008, the population has been projected to 13,520,098 (2009) and 13,947,592 (2010). Table 1.1 shows annual population growth rates since 1966. Substantial growth is also indicated by the annual rate of growth. Only in year 2033 will it be less than 3% per year.⁷

Table 1.1: Total Population 1966 – 2010

Census Year	Total Population	Average annual Growth rate (%)	Remarks
1966	4,039,583	3.3	Census
1977	5,547,460	2.9	Census
1987	7,988,508	3.7	Census
1998	9,933,868	2	Census
2008	13,077,160	2.8	Inter-censal growth rate
2009	13,520,098	3.1	Projected
2010	13,947,592	3.0	Projected

Source: Population and Housing Census 2008, Revised Nov, 2010.

The table above also shows that this trend may not easily translate into what the human resource for health implications might be in future due to various other underlying reasons. However, the projection took into account the effects of mortality due to AIDS; likely to influence lower life expectancy, higher infant mortality and death rates, population and growth rates, and changes in the distribution of population by age and sex.

Between 1998 and 2008, there was an increase in inter-censal annual growth rates and inter-censal population at national and regional levels. The annual growth rate in the Northern Region was 3.3 percent, Central Region 3.1 percent and Southern Region 2.4 percent. The annual growth rate for Lilongwe and Mzuzu cities is 4.4 percent, Zomba city (3.0 percent) and Blantyre city (2.8 percent). The Population and Housing Census, 2008, also showed that at district level, Mwanza had the highest growth rate of 4.1 percent; Chitipa and Mchinji 3.5 percent and Karonga 3.4 percent.

The lowest annual population growth is observed for Zomba rural at 0.6 percent. Across the regions, Table 1.2 shows a 39 percent inter-censal increase in growth in Northern Region, 36 percent in the Central Region and 26 percent in the Southern Region. Mzuzu City had the highest inter-censal growth rate with an increased growth of 54 percent and the lowest is Zomba rural with 6 percent.

⁷ Population and Housing Censuses, 2008, Revised November, 2010.

Table 1.2: Population growth rates and increases at National and Regional Levels

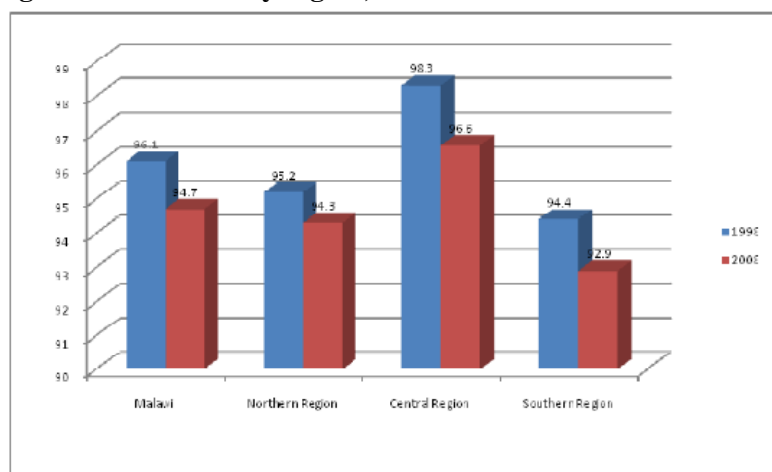
Region/District	Inter-censal annual Growth Rates (%)			Inter-censal Population Increase 1998-2008	
	1998-2008			Number	Percentage
	Both Sexes	Male	Female		
Malawi	2.8	2.7	2.9	3,143,292	31.6
Northern Region	3.3	3.3	3.4	475,370	38.5
Central Region	3.1	3.0	3.2	1,443,855	35.5
Southern Region	2.4	2.3	2.5	1,224,067	26.4

Source: Population and Housing Census 2008.

1.2.2 Population Composition

Age and Sex Distribution

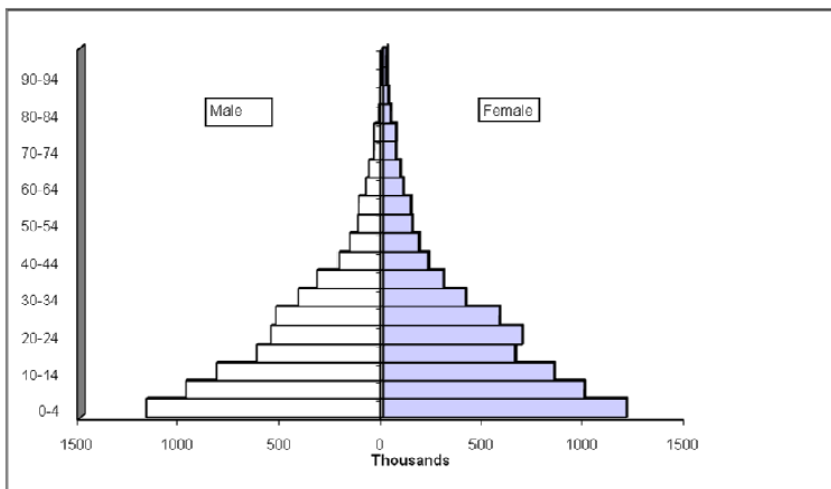
Malawi has a young population as almost half of the population is under 15 years (48%), and 49% is between 15-64 age group with slightly fewer males than females: 99 males for every 100 females. 0-14 years: 46.1% comprising of (male 3,143,724; female 3,130,937) 15-64 years: 51.2% (male 3,491,114; female 3,474,209) 65 years and over: 2.8% (male 155,954; female 207,243), and 15% of children aged 20 and below are orphans.⁸

Figure 1: Sex ratios by region, 1998 and 2008.

Source: Population and Housing Census 2008.

Figure 1 above illustrates the sex ratio for 1998 and 2008 at national and regional levels. At national level in 1998, the sex ratio was 96.1% and in 2008, the sex ratio is 94.7%, meaning there were more females than males, although this shows that there has been a decline in the number of females relative to males during the period under review.

⁸ NSO, Welfare and Monitoring Survey, 2009

Figure 2: Population Pyramid of Malawi

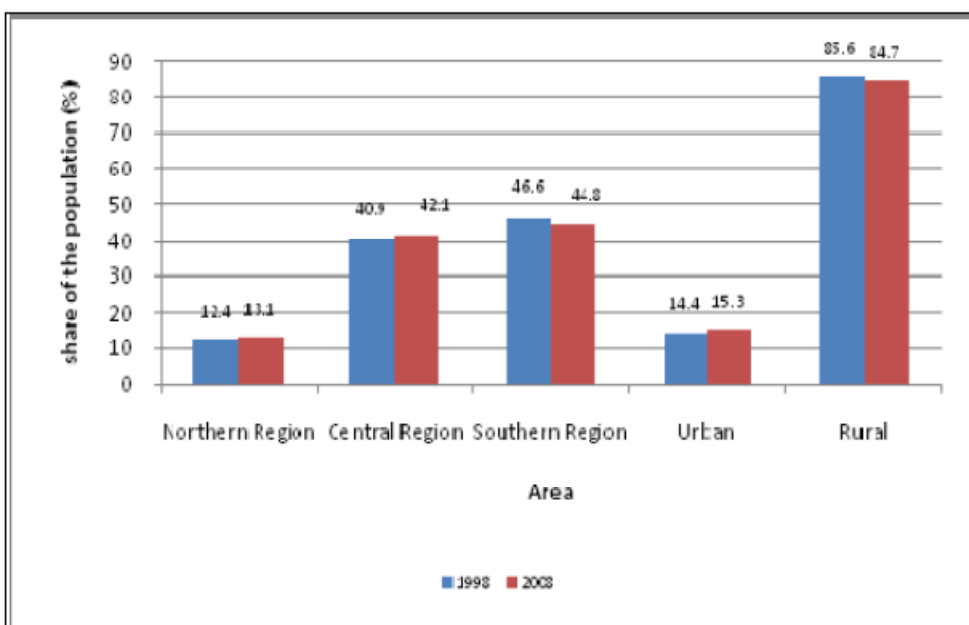
Source: Population and Housing Census 2008.

The age and sex pyramid in Figure 2 above shows that Malawi has a youthful population. This corresponds with the population census results of 2008 which show that in Malawi 2.8 million were aged under-five years and about 6.0 million were aged 18 years or more. At national level the census results reveal that about 7 percent of the total population in Malawi comprised infants aged less than 1 year, 22 percent were aged under-five years and about 46 percent were aged 18 years or older, while a further 4 percent were aged 65 years or older. The median age of the population in Malawi is 17 years.

1.2.3 Population Distribution

Spatial distribution

In Malawi, population is unevenly distributed among the three regions of the country. Figure 3 shows the percentage distribution of the population among these three regions. At the time of the census, about 45 percent of the total population was enumerated in the Southern Region, 42 percent for the Central Region and 13 percent for the Northern Region. This distribution pattern shows some changes in the population distribution since 1998 in which there is a reduction in the population residing in the Southern Region from 47 percent in 1998 to 45 percent in 2008. However there have been corresponding increases in the population shares residing in the Central Region from 41 to 42 percent and for the Northern Region from 12 to 13 percent, respectively.

Figure 3: Percentage Distribution of population by region, urban and rural 1998-2008

Source: Population and Housing Census 2008.

The largest populations were enumerated in a number of districts including Lilongwe rural (9.4 percent), Mangochi (6.1 percent), and Mzimba (5.6 percent). The least populated districts were Neno (0.8 percent) and Rumphi (1.3 percent).

Urban population

The urban areas in Malawi include the four major cities of Blantyre, Lilongwe, Mzuzu and Zomba. The other recently designated urban areas consist of what are called Bomas and gazetted Townships or town planning areas. Of the total urban population, 12 percent reside in the four major cities and 3.3 percent resided in the other urban areas. Urban population in Malawi has been on the increase from about 850,000 in 1987 to 1.4 million in 1998 and to 2.0 million in 2008 making these urban areas growing very fast and requiring increased health care services.

Population density

Population density, being the number of persons per square kilometer, has shown an upward trend. The population density increased from 85 persons per square kilometer in 1987 to 105 persons per square kilometer in 1998 and further to 139 persons per square kilometer in 2008.

Table 1.3 gives population density at national and regional levels for 1987, 1998 and 2008. Across the regions, there are more persons per square kilometer in the Southern Region (184) than in Central region (155) and Northern region (63). The Population and Housing Census, 2008, also revealed that among the districts, Likoma had the highest population density of 579 persons per square kilometer, Chiradzulu and Thyolo had 376 and 342 persons per square kilometer respectively. Rumphi district has the lowest population density of 36 persons per square kilometer followed by Mwanza with 40 persons per square kilometer.

Table 1.3: Population density at National and Regional level, 1987–2008

Region / District	Land Area (Sq. Kms)	Population Density		
		2008	1998	1987
Malawi	94,276	139	105	85
Northern Region	26,931	63	46	34
Central Region	35,592	155	114	87
Southern Region	31,753	184	146	125

Source: Population and Housing Census 2008.

1.2.4 Population Migration

The Population and Housing Census, 2008, estimated that the average number of immigrants was 16,855. The net international migration was -13,237. This number corresponds to the contribution of only -3.3% to the population change between 2007 and 2008. In the projection, it is not affirmed that international migration does not take place in Malawi, but that it is not sufficient to make a relevant contribution to the population size and demographic dynamics of the country.⁹

However, in terms of migration of health workers from Malawi, which from 2000 to 2004 was increasingly aggravating the HRH crisis, there was a voluntary code of practice for WHO member states being negotiated to provide hope to low-income countries, like Malawi, not to lose precious resources such as health workers after investing in their training. As an example, Health Ministers adopted an accord to avoid recruiting doctors and nurses from poor countries where there is an acute shortage of medical staff.¹⁰

1.3 Economic Context

1.3.1 Socio-economic Sectors

Malawi has a predominantly agricultural economy, with 85 percent of the population living in rural areas. Tobacco, tea, sugar and coffee are the most traded Malawian products.¹¹ The Government of Malawi developed the Malawi Growth and Development Strategy (MGDS) whose emphasis is to rebalance government expenditure from social to economic sectors. The MGDS highlights six focus areas where government is concentrating its efforts. The areas are: Agriculture and Food Security; Infrastructure Development; Irrigation and Water Development; Energy Generation and Supply; Integrated Rural Development; and Prevention and Management of HIV and AIDS.¹²

1.3.2 Malawi's Economic Performance

Available literature also indicates that traditionally Malawi has been self-sufficient in its staple food. During the 1980s the country exported substantial quantities of food to its drought-stricken neighbors. Agriculture represents 38.6% of the GDP, representing about 80% of all exports, and accounts for over 80% of the labor force. It is further reported that nearly 90% of the population engages in subsistence farming. Smallholder farmers produce a variety of crops, including maize (corn), beans, rice, cassava, tobacco, groundnuts (peanuts) and coffee. Information available further indicates that the agricultural sector contributes about 63.7% of total income for the rural population, 65% of manufacturing sector's

⁹ Population and Housing Census, 2008, Revised 2010.

¹⁰ MoH/DFID EHRP Evaluation Report, 2010, p 9

¹¹ Annual Statement of Trade Statistics, 2005-2006 Report

¹² Ministry of Finance; Malawi Public Expenditure Review 2006.

raw materials, and approximately 87% of total employment. Reports also show that real GDP increased by an estimated 3.9% in 2004, from 4.3% in 2003 and 2.4% in 2002 and grew by 6.5% in 2010. Inflation has been largely under control since 2003, averaging 10% in that year and 11.1% (est.) in 2004, and 8.0% in 2010.

For the main economic indicators, Table 1.4 below has a summary. Discount and commercial lending rates also declined from 40%-45% in 2003 to 25% in early 2004. The Kwacha slid from 90 to 101 against the U.S. dollar in mid-2003 and was at 108 to the U.S. dollar at the end of 2004. Currently, in 2010, the Malawi Kwacha is at 152 to a Dollar on the official market and 185 on the parallel market.

Table 1.4: Economic indicators 2000 – 2010

Indicators	2000	2004	2006	2010
GDP	\$ 1.77 bn	\$2.625 bn	\$3.163 bn	\$5.035 bn
National Debt as % of GDP	-	-	39.4%	36.0%
Economic Aid as % of GDP	60%	-	-	37.3%
Proportion of Govt. Budget spent on health as % of GDP	-	3.1%	2.1%	-*
Total Health Expenditure as a % of GDP	-	-	-	9.7% ¹³
Income per capita (in PPP)	\$592.366	\$643.83	\$ 800	\$908.64
Proportion of population living below poverty line	65.3%	53%	-	39.0%
% of Population living on less than \$2 a day	-	-	-	90.4%
Proportion of population with malnutrition	49% ¹⁴	-	-	-
Inflation rate	10%	11.1%	14%	8.0%

Source: MoF, Malawi Public Expenditure Review, 2006; NSO, 2001; National Health Accounts, 2008; NSO; December, 2010; Malawi Economic Report 2010; Malawi Country Report, 2010

* Data for the proportion of government expenditure as a percentage of GDP is currently just being collected.

Ministry of Finance (2006) reported that measures have been introduced to strengthen budget preparation and execution including pay roll management. Progress has been made in improving the coverage of donor support, thus improving the comprehensiveness of the budget starting 2006.¹⁵ Table 1.4 has the major economic indicators for Malawi up to 2010.

1.4 Orphan-hood

All those persons aged 18 years and below, who have lost at least one biological parent are termed orphans. The results of the Population and Housing Census 2008 show that of the 6,793,986 persons aged below 18 years, 837,300 (12.4 percent) were orphans. In Malawi, it was noted that 508,967 (7.5 percent) of children had their fathers dead as compared to 138,394 (2.1 percent) whose mothers had died. There were 189,939 (2.8 percent) who had lost both parents. In urban areas, orphan-hood was slightly higher than in rural areas registering 13.6 percent and 12.2 percent, respectively. There were no major orphan hood differentials by sex. Male orphans were 12.5 percent and female orphans were 12.3 percent. Reports also indicate that there are more than a million orphans, 700,000 of whom became orphans when their parents died of HIV/AIDS.¹⁶

¹³ Through consultations with MoH, Central Monitoring and Evaluation Division (CMED), 2010

¹⁴ This percentage is for children under 5 years (NSO, 2001)

¹⁵ Malawi Public Expenditure Review, 2009

¹⁶ Housing and Population Census, 2008

1.5 Political Environment

Britain ruled Malawi from 1891 to July 1964 under the Nyasaland Protectorate. In 1953, the Federation of Rhodesia and Nyasaland was created. It consisted of three countries namely: Zimbabwe then Southern Rhodesia, Zambia then Northern Rhodesia and Malawi then Nyasaland. Malawi became an independent state in July 1964 and gained its republican status in July 1966. The country became a multiparty state in 1994 following a national referendum in 1993. Currently, the Democratic Progressive Party (DPP) is the ruling party while the Malawi Congress Party (MCP) and the United Democratic Front (UDF) are the main opposition parties in the National Assembly. The democratic system of government is still in its infancy and this has implications for systematic and effective governance of all sectors including the health sector.

1.6 Health Status

1.6.1 Basic Health Indicators

The overall goal of the Ministry of Health (MoH) is to reduce the incidence of illness and occurrence of premature death in the population through the development of an effective health delivery system. Table 1.5 shows the main causes of morbidity and mortality up to 2009, with Malaria, HIV and AIDS topping the list among main causes of mortality. The health workforce status which provides the required health care as of 2008 is given in Annex 2 where the distribution by rural/urban and whether they belong to public/private is given. Also the gender distribution is also given in that Annex.

Table 1.5: Main Causes of Morbidity and Mortality

Main causes of morbidity	Value (%)	Main causes of mortality	Value
1.Malaria	48%	1. Malaria	0.5/1000
2. Diarrhoeal diseases	9%	2. HIV/AIDS	-
3.Abdominal Diseases	7%	3. Diarrhoeal Diseases (among Under 5s)	3.1/1000
4.Skin Diseases	7%	4. ARI (under 5 in patients)	1.9/1000
5. ARI	6%		-
All Others	23%	Others	-

Source: Malawi Health Bulletin Jan 2009.

1.6.2 Main Health Indicators

There are a number of important health indicators that can be cited here. These include Infant Mortality Rate (IMR) which was 72 per 1000 live births, Under Five Mortality Rate (U5 MR) was 122 per 1000, Maternal Mortality Ratio (MMR) was 807 per 100,000 live births, as of 2006 and the HIV&AIDS prevalent rate at national level was 12.3% as of July 2010, for some of these see Table 1.6 below and expanded in Annex 1. The Population Census 2008 Projections for 2010 have life expectancy for females at 54 and males 51.03 years.¹⁷

¹⁷ Population and Housing Census , 2008

Table 1.6: Main Health indicators as of 2010

Indicator	2000	2004	2006*	2010
Infant Mortality Rate	104/1000 live births (DHS 2000)	76/1000 live births (DHS 2004)	72/1000 live births (MICS 2006)	66/1000 live births (DHS Preliminary Report 2010)
Under 5 Mortality Rate	189/1000 (DHS 2000)	133/1000 (DHS 2004)	122/1000 (MICS 2006)	112/1000 live births (DHS Preliminary Report 2010)
Maternal mortality ratio	1120/100,000 live births (DHS 2000)	984/100,000 live births (DHS 2004)	807/100,000 live births (MICS, 2006)	
Life expectancy at birth	40 years (DHS 2000)	-	50 years (WHO 2006)	52.5 years (NSO Population Projections, 2010)

Source: MoH, DHS 2000; MoH DHS 2004, MoH DHS Preliminary Report 2010; WHO; MoH, SWAp Progress Report, 2010.

*Some of the information on the indicators was not yet available at the time of the study.

1.7 Incidence of sickness or injury

There are small differences on sex regarding incidence of sickness or injury, 11 per cent for males and 13 percent for females. Rural areas have a slightly larger percentage of sick persons than urban areas; 11 percent and 13 percent, respectively. Malaria accounts for 55 percent of those seeking health services. Malaria is by far the most serious health threat in Malawi, regardless of sex and place of residence. Urban households experienced slightly fewer malaria compared to rural households, 45 percent and 46 percent respectively.

1.8 Disease Burden

1.8.1 The Leading Selected Diseases or Injuries in Malawi

There are 10 leading selected diseases/injuries that may cause death in Malawi. The ranking of these diseases/injuries allows assessment of priority diseases and conditions which might be included in the strategies for achieving EHP if effective interventions are to be made available.¹⁸ Table 1.7 shows the extent to which the health delivery system has to address the disease burden in Malawi. The table shows unsafe sex as the leading risk factor, followed by childhood and maternal underweight. In their rank order, unsafe water, sanitation and hygiene comes next, then, zinc deficiency, vitamin A deficiency, indoor smoke and solid fuels, high blood pressure, alcohol, tobacco and iron deficiency.

¹⁸ Bowie, Cameron, The Burden of Disease in Malawi, College of Medicine, Blantyre, 2002

Table 1.7: Selected Leading Risk Factors for Mortality (death) in Malawi as at 2002

Rank	Risk Factor	% Total Deaths
1	Unsafe sex	34.4
2	Childhood and Maternal underweight	16.5
3	Unsafe water, sanitation, and hygiene	6.7
4	Zinc deficiency	4.9
5	Vitamin A deficiency	4.8
6	Indoor smoke from solid fuels	4.8
7	High blood pressure	3.5
8	Alcohol	2.0
9	Tobacco	1.5
10	Iron deficiency	1.3

Source: Cameron Bowie, *Burden of Disease in Malawi*, College of Medicine, 2002

Table 1.8 below, shows that the leading disease/injury in Malawi is HIV and AIDS followed by lower respiratory infections (LRIs), malaria, diarrhoeal diseases, conditions arising during perinatal period, cerebrovascular disease, ischaemic heart disease, tuberculosis, road traffic accidents and protein-energy malnutrition.

Table 1.8: The Leading 10 Selected Diseases or Injuries in Malawi as at 2002

Rank	Disease/injury	% total deaths
1	HIV/AIDS	33.6
2	Lower respiratory infections (LRIs)	11.3
3	Malaria	7.8
4	Diarrhoeal diseases	7.6
5	Conditions arising during perinatal period	3.2
6	Cerebrovascular disease	2.8
7	Ischaemic heart disease	2.6
8	Tuberculosis	2.4
9	Road traffic accidents	1.3
10	Protein Energy Malnutrition	1.0

Source: Cameron Bowie, *The Burden of Disease in Malawi*, College of Medicine, 2002

1.8.2 Life Expectancy

Life expectancy is 51.03 years for men and 54 for women. It means life expectancy at birth has improved from 40 to 52.5 years between 2005 and 2010 mainly as a result of availability of HIV/AIDS treatment. The Malawi government estimates that 12.3% of the population is HIV-positive. The number of HIV positive people alive and receiving treatment increased from 61,430 in 2005 to 224,999 in 2010. The main causes of disease and therefore death are shown in Table 1.8 above.

1.9 Demand for Formal Facility based Health Services

1.9.1 Health consultations

From a sample of households visited in the Welfare Monitoring Survey, 2009, there were more females than males who visited a health provider, 14 percent and 11 percent, respectively. People in rural areas

visited a health provider more than the urban population, 13 percent as compared to 12 percent. The majority of people (60 percent) with a need for health consultation visited a government hospital or clinic, regardless of sex and place of residence. More people in urban areas visited private hospitals than in rural areas, comprising 18 percent and 6, percent respectively¹⁹

1.9.2 Place of child delivery

The Welfare and Monitoring Survey, 2009, indicates that forty-one (41) percent of under-5 children were delivered at a hospital, 25 percent at a health clinic or health centre, and 22 percent at home (see Table 1.9). The table also shows that the mother's education have a bearing on the type of facility where the child is delivered. The higher the educational level of the mother, the more often children had been delivered at some kind of health facility. In urban areas, the majority of children were delivered in a hospital, 61 percent and 8 percent were delivered at home. In rural areas, the comparable proportions were 38 percent and 23 percent, respectively. Despite the fact that there are more deliveries made in homes most of which are in rural areas, there are fewer skilled health workers to cover those deliveries. Also see Table 3.6 below on distribution of skilled health workers country-wide.

Table 1.9: Percentage distribution of under 5 children by place of delivery according to background characteristics, Malawi 2009

		Place of delivery						
		Hospital	Health Clinic	Health Centre	Health post	At home	Other	Total
	Malawi	41	9	25	1	22	2	100
Sex of child	Male	41	10	24	1	22	2	100
	Female	42	9	25	1	21	2	100
Age of mother	Under 15	37	6	22	2	30	1	100
	15-24	44	9	25	1	19	2	100
	25-34	41	9	25	1	21	2	100
	35-49	34	10	24	2	28	1	100
	50+	47	3	29	0	21	1	100
Education of the mother	None	35	10	21	1	30	2	100
	Primary 1-5	35	8	26	2	26	2	100
	Primary 6-8	45	9	28	1	15	2	100
	Secondary above	59	10	21	0	8	0	100
	Mother not a household member	38	9	22	0	15	1	100
Region	Northern	47	8	31	0	14	0	100
	Central	46	11	12	1	26	1	100
	Southern	34	8	33	1	19	3	100
Place of residence	Urban	61	10	19	0	8	1	100
	Rural	38	9	25	1	23	2	100

Source: Welfare Monitoring Survey, National Statistical Office, 2009.

1.9.3 Personnel who assisted in child delivery

The majority of the child deliveries (67 percent) were assisted by a midwife, 16 percent by a trained traditional birth attendant (TBA) and 8 percent by a doctor or clinical officer. In urban areas, midwives

¹⁹ Welfare and Monitoring Survey, 2009, p22

assisted in 76 percent of the deliveries and 65 percent in rural areas. Trained TBAs assisted in six percent of the births in urban areas compared to 17 percent in rural areas. In the advent of shortage of skilled health workers, especially in rural hard to reach areas, government has to put up very rigorous strategies to attract and retain health workers in these areas so that all the population is covered and is provided with the essential health package (EHP). There has been improvement in the proportion of births with medical assistance, from 40% in 2005 to 58% in 2010 due to an increase in the number of reproductive health workers and midwives, amongst others.

1.9.4 Child Immunization

Malawi has realized good performance in vertical health interventions during 2006/07 and 2007/08 fiscal years. However, health services that are highly reliant on existence of health facilities have suffered. Good progress was however registered in immunization coverage and as a result vaccine preventable diseases such as poliomyelitis, neonatal tetanus, measles have dramatically been reduced. In 2005 proportion of 1 year old children immunized against measles was 82% and in 2009, the proportion improved to 88% (Welfare Monitoring Survey, NSO, 2009). The DHS 2010 Preliminary report shows that 93% of the children aged 12-23 months were vaccinated against measles. This positive situation has been contributed largely by the recruitment and training of community-based health workers such as Health Surveillance Assistants (HSAs). However, as recently as 2010, Malawi experienced a measles outbreak, the magnitude of which has not yet been established.

1.10 Mortality

1.10.1 Crude Death Rate

The Crude Death Rate (CDR) is defined as the number of deaths that occurred in a given calendar year per 1,000 population. Table 1.10 shows that a total of 135,865 deaths occurred during the 12 months prior to the census which gives a CDR of 10 deaths per thousand population.

Table 1.10: Reported number of deaths and CDR by sex, urban, rural and region, 2008

Area	Number of Deaths	CDR (de-jure) per 1,000 population
Malawi	135,865	10
Male	70,991	11
Female	64,874	10
Urban	17, 502	9
Rur10al	118,363	11
Northern	16,439	10
Central	45,496	8
Southern	73,930	13

Source: Population and Housing Census, 2008.

1.10.2 Maternal, Infant and Child Mortality Rates

The under 5 mortality per 1000 live births has improved from 133 in 2004 to 112 in 2010²⁰. The infant mortality rate declined from 76 per 1,000 live births in 2004 to 72 in 2006 and 66 in 2010.²¹ The maternal mortality ratio dropped from 984/100,000 live births in 2004 to 807 in 2006 but remains alarmingly

²⁰ DHS Preliminary Report, 2010

²¹ Ibid.

high.²² According to the National Aids Commission (NAC), HIV/IDS adult prevalence rate was 14.1% in 2005 and has reportedly stabilized at 12.3% in 2010. Malaria incidence has declined from the extremely high rate of 812 cases per 1000 in 1992 to around 282 per 1,000 in 2005 (MoH, HMIS).

1.11 Child Nutrition Status

Malnutrition remains alarmingly high among children. It is reported that the country's 48% stunting rate in 2004, and 36% in 2009, was one of the worst in Africa and has not improved within a decade.²³ From Table 1.11), it can be noted that except for wasting, baby boys suffer more from malnutrition than baby girls. Children with the most highly educated mothers are less likely to be stunted or underweight than other children. Rural areas experienced a higher proportion of both stunted and underweight children, 36 percent and 18 percent respectively compared to urban areas 31 percent and 12 percent, respectively. This has an important implication on demand for health care services for infants and children under-5 years of age, especially in rural areas.

Table 1.11: Percentage distribution of malnourished under 5 Children by type of malnourishment and background characteristics, Malawi, 2009

		Type of Malnourishment		
		Stunted	Wasted	Underweight
Sex of Child	Malawi	36	1	17
	Male	39	2	19
	Female	35	1	16
Highest level of Mother's Education	None	38	2	20
	Primary 1-5	38	1	19
	Primary 6-8	34	1	15
	Secondary and above	28	1	11
Place of Residence	Urban	31	1	12
	Rural	36	1	18
Region	Northern	29	1	10
	Central	36	1	19
	Southern	37	1	16

Source: Welfare Monitoring Survey, NSO, 2009

1.12 Fertility

1.12.1 Crude Birth Rate

The Crude Birth Rate (CBR) is defined as number of births that occurred in a particular year per 1,000 population. There were 516,629 children born to all women in the 12-months prior to the census date. This gives the unadjusted CBR of 39.5 births per 1,000 population. The CBR was higher in rural areas (40.4) than in urban areas (34.6). At regional level, the CBR was 39.9 births per 1,000 population in the Northern Region, 40.5 in the Central Region and 38.6 in the Southern Region.

1.12.2 Total Fertility Rate

The Total Fertility Rate (TFR) is defined as the number of births a woman would have if she survived to the end of her childbearing age, which ranges from 15-49 years, and experienced the current observed

²² .MoH SWAp Progress Report, 2010.

²³ Ministry of Finance, Publication 2006

age-specific fertility rates. Table 1.12 shows that the unadjusted TFR was at 5.2 children per woman. This rate is showing an improvement most likely as a result of increased efforts to implementation of family planning initiatives by government.

Table 1.12: Number of women (15-49) and births in the last 12 months, ASFR and TFR

Age group	Women 15-49	Birth in last 12 months	ASFR
15-19	635,927	70,737	0.11
20-24	678,071	169,406	0.25
25-29	566,350	130,331	0.23
30-34	405,602	79,232	0.20
35-39	298,004	43,747	0.15
40-44	221,274	15,956	0.07
45-49	174,875	5,599	0.03
	2,980,103		1.04 TFR=5.2

Source: Welfare Monitoring Survey, NSO, 2009

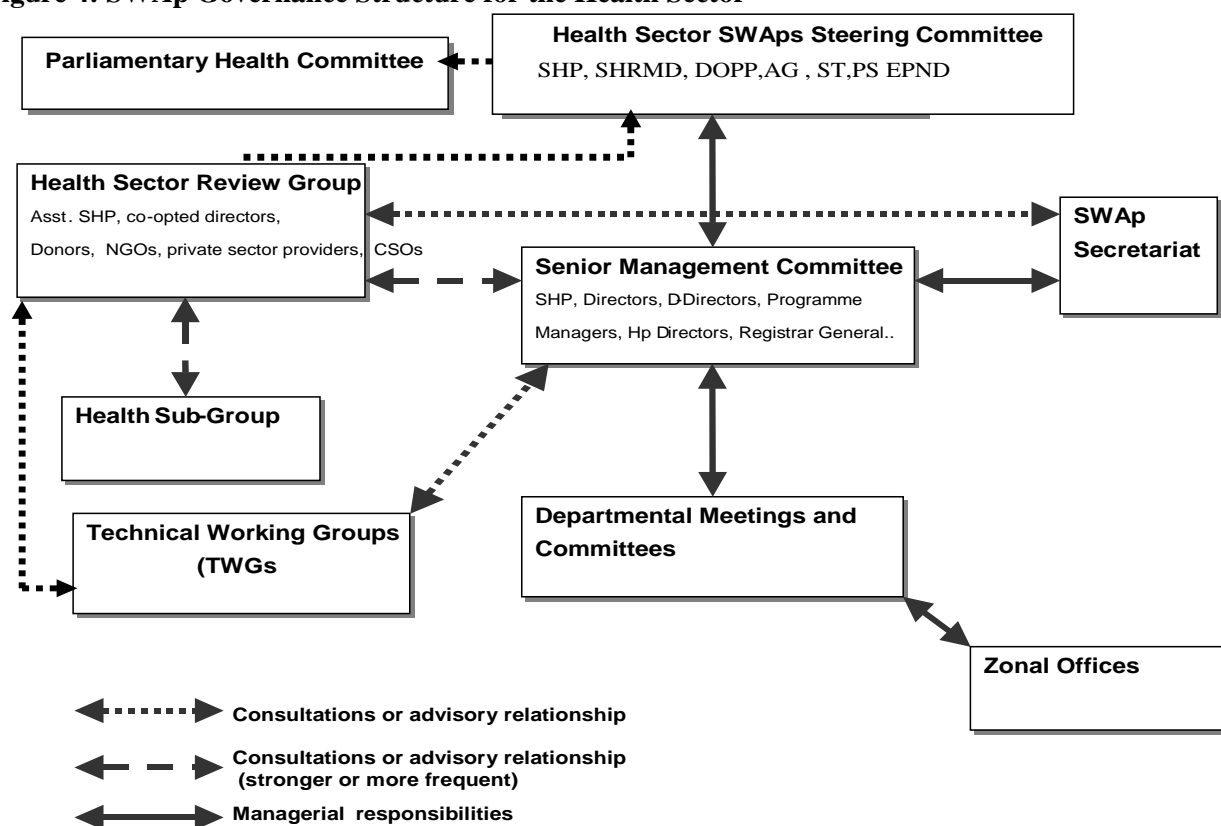
2 Country Health System

2.1 Governance

2.1.1 The Governance Structure

The setting-up of all operations of the Ministry of Health are provided for in a Parliamentary Act. The Act provides for the involvement of the Cabinet, Legislature and the Judiciary. While the Cabinet provides health policy direction, the Legislature enacts health laws and passes health care funding bills. In the Legislature, health laws are enacted with support from the Parliamentary Committee on Health and Population which scrutinises the relevance of the health bills before they are enacted. The Judiciary is the custodian of public health acts and laws. Figure 4 illustrates the governance structure of the health sector.

Figure 4: SWAp Governance Structure for the Health Sector



Source: MoH, Draft SWAp 2 of POW Document, 2010

Malawi's health services are provided by a combination of public, private (for and not for profit), FBOs and NGOs, traditional and complementary medical practitioners and the informal sector. For purposes of financing health services, a Sector Wide Approach (SWAp) mechanism was adopted in 2004/2005 fiscal year to ensure participation of all stakeholders including development partners in priority setting and resource allocation. To enable the SWAp mechanism to operate efficiently, there is a SWAp Steering Committee, commonly known as Health Sector Review Group (HSRG) whose membership includes MOH, development partners, NGOs, FBOs and other providers. Under the main Steering Committee for SWAp I, were Technical Working Groups such as Finance and Procurement, HRH, Essential Health

Package (EHP), Drugs and Medical Supplies, Hospital Reforms and M&E TWGs. The structure remains in SWAp II and TWG will be implemented according to building stones of SWAp II and the need for cross-cutting issues and specific approaches to be dealt with separately. All these groups help to guide work in their specific areas of specialization. Membership to the groups is drawn from all health care stakeholders including, but not limited to, regulatory bodies, academia, and NGOs.

2.1.2 The Management Structure for the Health Sector at all levels

The Ministry of Health has three management structures which include Ministry of Health Headquarters which coordinates health related activities with other government sectors and development partners, nongovernmental organizations and universities. The mandate of MoH Headquarters is to promulgate health policies and develop plans and offer technical support to health provision centres. The Zonal offices offer technical support and supervision to district health services and the District Health Office offers operational support for health services to the district. Currently, Government of Malawi has devolved the management of social services to district assemblies which include health services.

In the new decentralized structure, the Ministry of Health is responsible for technical supportive supervision, quality control through, amongst others, professional regulatory bodies, health policy, planning and evaluation, research, budget and finances, supplies and equipment, infrastructure development and interaction with development partners/international community. There is however limited integration of planning and implementation of development activities at district level and between District Councils and the District Health Management Teams (DHMTs).

2.2 Health Service Provision

2.2.1 Health Policy

The overall policy of the MoH is to raise the level of health status of all Malawians through the development of a health delivery system and delivery of health care services capable of promoting health, preventing, reducing and curing disease, protecting life, and fostering the general wellbeing and increased productivity and reducing the occurrence of premature death (SWAp POW 2004-10).

2.2.2 Access to Health Services

To implement the national health policy Malawi has built and established several structures at national, regional, district and community level. Currently, Malawi has a network of health facilities belonging to different ministries and agencies. About 85% of the population lives within 8 km of a health facility.²⁴ The facilities range from small dispensaries on estates to large hospitals in cities. Between these agencies, there were 843 health facilities in the country in 2002, and in 2008, the number increased to 1007, where more than 50% were health centres (dispensaries/maternity units) (see Table 2.1).

Although Malawi has this good network of health facilities, a JICA/MoH inventory in 2002 found that only about 9% of government and mission health facilities were capable of providing the Essential Health Package (EHP) onsite. In each district, only one or two facilities had adequate EHP capacity²⁵. These service deficits arise from lack of health workers, supply stock-outs, and lack of basic utilities (water,

²⁴ Consultations with Officials of MoH, CMED, 2010

²⁵ The JICA study applied the following criteria in determining whether a facility had the capacity to deliver EHP services: (1) it must be able to deliver outpatient care, family planning services, maternity services, and immunization; and (2) it must have the following staff complement – medical assistant or clinical officer (one per facility), and nurse/midwife (two per facility).

electricity, and phone or radio communication). Currently, as shown in Table 2.1, ownership of health facilities is 55% by Government, 14 % by CHAM, 20% by private for profit, 6% by NGOs and 5% by companies.

2.2.3 Health care provision

Health services in Malawi are provided through a network of both public and private providers at three levels, namely; Primary, Secondary and Tertiary levels. The primary level is the first level of care which encompasses services offered at the community (in some cases in form of village clinics), health posts, health centres and rural hospitals. Secondary level comprises of services offered at district hospitals and their equivalent CHAM and private hospitals while tertiary level comprises of four central hospitals and two mental hospitals that provide specialist care.

Health care in Malawi is predominantly offered by public hospitals and the Christian Health Association (CHAM), a heavily publicly subsidized non-profit religious provider, and the private-for-profit sector which became very important in terms of the total number of facilities owned. Generally, it is claimed that the public sector in Malawi, includes the Ministry of Health providing 60% of the health services, and the Christian Health Association of Malawi (CHAM) providing 40% of the health services.²⁶

However, Table 2.1 below shows ownership of health facilities in Malawi by each one of the three levels of care. It shows that together, the Malawi Government and CHAM own 69% of health facilities in the country (55% owned by Government and 14% by CHAM, respectively). It also shows that the private-for-profit providers are very dominant in the provision of primary health care and that overall, they control 20% of health facilities in the country. The rest of health facilities are owned by NGOs (6%), statutory organizations (1%) and private companies (5%).

Table 2.1: Ownership of Health Facilities in Malawi by Level of Care

Ownership	Level of care			Total	Proportion
	Primary	Secondary	Tertiary		
Government	493	53	5	551	55%
CHAM	96	42	1	139	14%
NGO	56	1	0	57	6%
Private for profit	196	4	1	201	20%
Statutory Organization	13	0	0	13	1%
Company	47	0	0	47	5%
Total	901	100	6	1007	100%

Source: Ministry of Health, Malawi Health Sector Employee Census, 2008

2.3 Financing of the Malawi Health Care System

2.3.1 The General Health Funding Situation

Government expenditure on health in Malawi was less than 10% of the total government expenditure over a period of time. This is far below the Abuja target, which committed governments in Africa to allocate at least 15% of their national budget on health.²⁷ If government allocation to the health sector as a proportion

²⁶ MSH-MSC, EHRP Evaluation Report, 2010, p7

²⁷ OAU: Abuja Declaration on HIV/AIDS, tuberculosis and other related infectious diseases. Abuja 2001.

of total national government expenditure increased from its 2005/2006 level (6.3%) to the level of the Abuja Declaration (15%), government per capita expenditure on health would have increased to US\$ 14.1. This increases the per capita total expenditure on health to about US\$34. Government priorities seem to have been changing from one year to the other as indicated by the share allocated to health. It should, however, be noted that despite a decline in government allocation to health from 8.4% in 1998/99 to 6.3% in 2005/2006, there was a slight increase in absolute terms.²⁸

Table 2.2: Summary of Donor Contribution to Health Financing 2008/2009 (in US\$)

Donor	Total Disbursements	No. of Projects/Programmes	Average Annual Project Disbursements
AfDB	6,298,118	1	6,298,118
CIDA	49,411	1	49,411
DfID	31,490,779	7	4,498,683
EU	6,441,060	6	1,073,510
FICA	330,120	1	330,120
GDC	8,588,406	7	1,226,915
Global Fund	111,770,649	6	18, 628,442,
ICEIDA	557,170	1	557,170
Japan	1,534,314	2	767,157
Norway	24,602,812	10	2,460,281
UN Agencies	3,597,878	24	149,912
USAID	53,192,291	39	1,363,905
World Bank	3,689,202	2	1,844,601

Source: Government of Malawi, *Malawi Aid Atlas (FY2008/2009)*

Table 2.2 above is showing that there were substantial increases (data is only for one year) in donor support into the health sector as a proportion of total funding into the health sector. Government funding was therefore showing some decline in real terms, as more and more donors participated as discrete funders or as part of the basket pool described below. What needs to continue to be emphasized is the government's contribution to the health sector in accordance with the Abuja declaration in 2001 in which governments agreed to put aside a minimum of 15% of funding towards the health sector to address the burden of disease in countries in Africa, particularly in the context of growing HIV and AIDS, TB and Malaria.²⁹

From a situation of so-called “balkanization” of the country whereby development partners in the health sector provided assistance to Malawi in a project form and by geographical area/district, the Ministry of Health in 1999 made a decision to move from a project approach to a Sector-Wide Approach (SWAp).³⁰ In 2004, the Government of Malawi together with its developing partners finalized work on a six years Program of Work (POW) cost at US\$ 763 Million.

The SWAp POW is based on the Essential Health Package (EHP) which is a minimum package of health services to be freely provided at the point of need and composed of the most common causes of mortality and morbidity in Malawi including malaria, TB, HIV/AIDS, malnutrition, diarrhea, cholera, acute

²⁸ Zere et al, Health Financing in Malawi: Evidence from the Nation Health Accounts, BioMed , Nov, 2010

²⁹ EQUINET Discussion Paper No. 60, April, 2008.

³⁰ SWAp Design Mission Final Report, 2002

respiratory tract infections etc. The implementation of the POW is based on consolidated activities from the District Implementation Plans (DIPs) and Annual Work Programs (AWP) for Central MOH Departments and Central Hospitals which are then consolidated into an Annual Implementation Plan (AIP) of the SWAp.

2.3.2 SWAp Financing Mechanisms and Sources

Norway/Sweden, DFID, UNFPA, World Bank, the ADB, and a lot more cooperating partners such as KFW, UNICEF as well as Global Fund joined the SWAp Pool in 2006 funding the SWAp through the round two Malaria grant, the round five Health Systems Strengthening grant as well as the recently approved round seven TB grant, for all of which the Ministry of Health is the Principal Receipt (PR)) are signatories to the MOU as so called “Pool donors” (Mode I), providing sector budget support in support of the SWAp. All Pool financing to the sector is channeled through the financial systems of the Government of Malawi (GoM) and use agreed GoM and World Bank Procurement Procedures for national competitive bidding and international competitive bidding respectively. Currently, the design of SWAp 2 is under way, but the funding mode and the intervention priority areas are yet to be decided. This will determine who will join the SWAp funding mechanism.

Box 1: Modes of Funding as provided for in the Swap POW 1 MOU

The Swap MOU provides for the following:

Mode I (Pool or Basket funding)

Under Mode I, contributions from Collaborating Partners are channelled directly to the MoH and deposited in a common bank account. These funds are controlled by the MoH and are available for the entire sector.

Mode II

Under Mode II, contributions from Collaborating Partners are channelled directly to the MOH. These funds are controlled by the MoH and are available for the entire sector, i.e. not ear-marked. Funds are deposited in separate individual bank accounts, not in a common account.

Mode III

Under Mode III, contributions from Collaborating Partners are channelled directly to the MOH. These funds are controlled by the MoH. These funds are controlled by the MoH. Whilst these funds are deposited in separate individual bank accounts as in mode II, they are available only for specific activities, i.e. they are ear-marked.

Mode IV

Under Mode IV, these funds are channelled directly to either an activity implementation team or a relevant entity and are not controlled by the MoH. They are available only for a specific activity under the Sub-Programme of the POW. They are deposited in separate individual bank accounts as appropriate.

A Memorandum of Understanding (MOU) was subsequently signed by the GoM and its development partners to finance and support the POW. The MOU provides for a common framework for health sector planning, budgeting, financing, financial management, and reporting and monitoring and evaluation, as well as agreement on both yearly and mid-term reviews.

There are a number of donors who opt to operate as “discrete donors” (see Modes explanation in the Box 1) who provide discrete funding (through project support), but still as signatories under the SWAp MOU. The Ministry of Health centrally manages individual bank accounts for these discrete donors. Procurement for non-pool funding is conducted according to the regulations of each partner.

2.3.3 Funding from Public Financing

This is the main source of health financing in Malawi. The majority of the people in Malawi are poor and cannot afford to pay for their health care. As a result, the Government of Malawi provides free health care at its health facilities to all residents in Malawi, as well as free referrals for to specialised treatment outside the country. In addition, public health finances are used to subsidize the cost of health services at CHAM facilities through payment of salaries and other personnel costs. In turn, CHAM providers charge a fee to a client which is less the subsidised amount. In addition, some public hospitals have also entered in service level agreements with CHAM facilities where there are no government health facilities and this allows for some services at CHAM facilities to be accessed free of charge as government pays for them within the framework of SLAs.

2.3.4 Funding through Service Level Agreements

Malawi Government has introduced Service Level Agreements (SLAs) for maternal and child health services through which mothers and children access health care in CHAM facilities free of charge. In this mechanism, DHOs make agreements with CHAM institutions at their level at which health services are provided free of charge by CHAM institutions and the cost of which are subsidized by the DHO from their budgetary allocation to ensure coverage. There are currently 72 SLAs in operation. This mechanism has contributed to the improved access to health care services, especially for the poor and vulnerable in the rural communities.³¹

2.3.5 Private Financing

Private financing is the second major source of health financing in Malawi for a number of reasons. First, a full range of publicly financed health services is only available at public facilities, and a limited range at some CHAM facilities with SLA. A good proportion of the population is still not covered by a public facility and the private sector has seized the opportunity to establish their facilities around these uncovered communities. As a result, such communities have to make an out-of-pocket payment for use of health services at the for-profit health facilities.

Secondly, users of services at CHAM facilities that are not covered within the SLAs also have to pay what is called user-fees. User-fees at CHAM facilities are heavily subsidized because Government pays for human resource costs and supplies drugs, medical supplies and basic equipment. Thirdly, because of the free nature of publicly provided services, and the financial constraints characterising public financing and provision, public services are perceived to be of lower quality by those with ability to pay. As a result, the private sector has also come in to cater for such clients who want to pay for health services out of choice. Even at some public health facilities, there are optional paying wards to cater for those with ability and willingness to pay.

2.3.6 Public and Private Health Insurance

At the moment, there is no social health insurance system operating in Malawi. However private health insurance exists, but to a small degree largely due to the state provision of free health care and financing of health services, and in part due to the high levels of poverty. In recent years, however, private health insurance is becoming an important element of health financing. Those currently covered by insurance schemes such as Medical Aid Society of Malawi (MASM) are employees of institutions that provide

³¹Consultations with Officials in MoH, CMED, 2010.

either full or partial medical insurance cover and international utilisation of health insurance is almost negligible.

2.3.7 Employers' Supported Financing

The final means of health financing in Malawi are through Statutory Corporations (Government owned firms) and private companies that operate facilities and offer services to their employees and part of employee benefits.

2.3.8 Contribution to Total Health Financing by Funding Agent

In 2005/06 total government expenditure on health as a percentage of GDP was 2.1 % and total expenditure on health as a percentage of GDP was at 9.8%. During the Malawi Government Financial year 2005/06, total expenditure on health was estimated at US\$240 million representing a per capita expenditure of US\$25 per annum which was far short of the US\$34 that the WHO Commission on Macroeconomics and Health recommends for a package of basic, cost-effective health care interventions in developing countries. Of this, Government contributed 22% and donors contributed 51% of the total health expenditure in 2005/2006. GFATM contributed 9% in 2005/06. Private health expenditure was at 18% of total health expenditure out of which household out-of-pocket expenditure was 9%. The remaining 2 % comprised private health expenditure by employers through direct provision and employee health insurance schemes as well as household health expenditures on private health insurance.

In terms of distribution of total Health care expenditure by disease, other diseases made up 53% in 2005/06. The contribution of HIV/AIDS expenditure was at 23.66% in 2005/06. Expenditure on Malaria was at 22% in 2005/06. TB expenditure was at 1.26% in the same period.

2.3.9 HIV/AIDS Health Funding

The National AIDS Commission (NAC) continues to effectively coordinate and provide leadership in the HIV and AIDS national response through the Integrated Annual Work Plan (IAWP), which is an implementation tool for the National HIV and AIDS Action Framework (NAF) as well as the National HIV and AIDS Policy. The IAWP includes so called “pooled” donors such as Government of Malawi, DFID, Norway/Sweden (The Norwegian government jointly administers Swedish aid as Sweden does not have a presence in Malawi), CIDA and the World Bank (the Global Fund has since joined the HIV/AIDS pool, under Malawi's round one HIV/AIDS grant) and discrete donors such as ADB, CDC, UNDP and JICA, KFW.

2.4 Health Information

2.4.1 Health Management Information System

The Ministry of Health has a fully fledged Health Management Information System (HMIS) unit under the Central Monitoring and Evaluation Division (CMED) of the Department of Planning and Policy Development headed by a Deputy Director. This division is staffed with qualified statisticians who link up with all the districts in collecting and compiling information and use this information for monitoring performance. The division is well connected with internet and periodically disseminates health information in semi-annual and annual reports called Health Management Information Bulletins.

Under the national HMIS, all health facilities in Malawi conduct routine passive surveillance of outpatient cases, inpatient cases, and inpatient deaths. Based on data derived from surveillance as well as from

linkages between various data sources. Initiatives are underway to link community and facility based HMIS different departments including administration, finance and all other units, a number of indicators for district health services and tertiary care services are routinely monitored. In accordance with the National Health Information Policy (2003), each facility is expected to record and collect data while delivering services and report to the district health office. Each facility is expected to submit its monthly reports to the District Health Office (DHO) on a quarterly basis except in some Management Sciences for Health (MSH) supported districts where monthly submissions were being piloted and encouraged. There are other private and NGO facilities which do not directly report to DHOs but report to the nearest MoH/CHAM facility. The data from such private/NGO facilities is incorporated into the data reported by the corresponding MoH/CHAM facility. Each reporting facility is expected to perform daily, monthly, quarterly and annual compilation and analysis of the data and take necessary actions aimed at improving the management of health programmes and activities thereby improving coverage and quality of services. Zonal Health Support Offices have M&E officers who receive data from the districts much earlier and produce shorter quarterly reports.

All DHOs and central hospitals (CHs) are required to process monthly data by computer and disseminate reports on a quarterly basis to all stakeholders in the district and provide a feedback to their respective facilities. Electronic raw data are then forwarded to headquarters at Central Monitoring Evaluation Division (CMED), formerly called Health Management Information Unit (HMIU) every three months by email/other forms of electronic data transfer, for further analysis and use at the national level. The CMED compiles data from both district and central hospital sources and intends to produce in future quarterly bulletins. Currently half-yearly and annual bulletins for the fiscal year are being produced in order to facilitate the use of information in review and planning processes at national and district levels.

Currently, a comprehensive and decentralized HMIS is fully functional and District Health Information System (DHIS) software has been installed and operationalized. The Health Information System Policy and Strategy (HISPS, 2003) has been developed by the Ministry and implementation of HMIS is in line with HISPS. The strengths include availability of a series of HMIS health registers designed along with training manuals to ensure all key indicators are collected for use and dissemination; provision of training to key personnel on how to use the registers as an on-going activity to ensure all health sector staff have the necessary skills; a system of monitoring and evaluating along with checklists in order to ensure compliance, identification of problem areas and assist in supervision of the HMIS system (Health Information Systems Report, 2009).

Despite several achievements, HMIS is still experiencing some weaknesses which include inability of cost centres to provide required data in an appropriate format. The quality of data is also low in terms of completeness, reliability and timeliness. Production of 6-monthly bulletins is currently delayed essentially due to delays in receipt of reports from districts and central hospitals. There is weak linkage between various data sources and no triangulation of data from various sources which affect the quality of data into the HMIS. Some vertical programs continue to collect and use their own indicators different from those articulated in the HMIS. By and large, there is limited data analysis and use of information in the management of health services.

HMIS activities have been included in the joint POW for SWAp and financial and technical support has also been enhanced. Over 500 statistical clerks have been recruited to work in all government health facilities to improve generation of quality data. The HMIS is being reviewed currently to take on board program information needs and minimize parallel reporting systems.

2.4.2 WHO and VSO Contributions to strengthening HRMIS

WHO has been instrumental in supporting the long term goal of integrating HRMIS with HMIS in the MoH. WHO's initiatives included conducting a situational analysis for HRMIS, procurement of HRMIS package, the procurement of computers distribution of those computer to the district health offices, and training of officers to man the system at the central and district levels. Meanwhile, VSO provided the TA required for setting up of the HRMIS system in MoH. This process began in June 2009 when the Interim Access HRMIS Database was piloted at the MoH Headquarters' Records and Registry Section. All data and information from the old system were loaded onto the new system and training on the HRMIS Database was conducted in December 2009. This was followed up with monitoring early in 2010 to assess how well the system had been rolled out in the pilot districts. The results of these initiatives included training of 76 staff on the database in order to roll out the access HRMIS Database to 27 District Health Offices, 4 Central Hospitals, 1 Mental Hospital and the Health Service Commission.

As mentioned, evaluation of this initiative took place in early 2010 which showed mixed outcomes in terms of the levels of utilization of the system. While some centres had managed to make effective use of the system, others were still struggling, either from a lack of awareness of the system (i.e. a lack of knowledge sharing from those trained), or internet connection, or a lack of appropriate communication with headquarters. WHO addressed these issues by donating appropriate computers, printers and an internet server to improve the system. After overcoming these initial problems, the system has now been improved and linked to a large number of district health offices in Malawi. It currently provides information to a variety of developments partners with an interest in public health as well as allowing the government to improve HRH planning in Malawi.³²

The HRMIS has now been successfully rolled out countrywide. Since computers were procured and distributed to all District Health Offices and Central Hospitals around the country, also using resources from the Global Fund Round Five Health Systems Strengthening Grant. With WHO's initiative, district-level training in database management and trainings in M&E and Database Management were conducted at the district level. The new HRMIS system based in MS Access has now been developed and rolled out in all MoH institutions by 2009.³³ Now districts are reporting HR figures which are linked to the HRMIS to MoH at central level since in January 2010. The current MS Access HRMIS system will be online database once connectivity to the districts has been achieved. However, the VSO who provided the major part of the assistance in the installation of the system has since left without transferring the much required skills in managing the system locally. This requires urgent attention to continue on the progress so far.

³² Development of HRMIS in Ministry of Health in Malawi, VSO Office, Malawi, 2011

³³ Personal communication with Josephine Logronio, VSO Volunteer and developer of HRMIS database, in Lilongwe 24 March 2010.

3 Health Workers Situation

3.1 Health workers stock

3.1.1 Health Worker/Population at National Level

The stock of health workers is based on the findings of the HRH census of 2008 conducted by the Centre for Social Research in Zomba facilitated by the Central Monitoring and Evaluation Division (CMED) and the EHRP Evaluation 2010. The census report gives an entire picture of human resources in the health sector in Malawi. No cross-sector HRH census has been conducted since then. It is therefore difficult to get detailed human resources for health information across the sector without conducting a fully fledged census. As shown in Annex 2, the human resources information system in MoH mostly covers the ministry's workers. CHAM has an HRH information system but it covers CHAM workers only. An attempt was made to get HRH data from health workers from professional regulatory bodies. But terminology definitions of certain categories of health workers made it difficult to allocate and get the right numbers.

However, Table 3.1 below has a list of categories of health workers and their numbers between 2008 and 2010. This list was compiled from a number of sources, some of which did not have comparable figures. Hence, some discrepancies exist between the numbers from the regulatory authorities and those from practicing health institutions, sometimes as a result of differing definitions and also the registration status with the regulatory bodies. This table has been complemented by the health worker status by rural/urban health worker distribution also by gender in Annex 2. Table 3.2 provides different ratios due to different sources of data and classification of cadres as obtained by the EHRP Evaluation.

Table 3.1: Health worker/Population ratios at national level

Occupational categories /Cadres	2008	Ratios	2010	Ratios
	Number of HW from HRH Census	Health Workers / 1000 Population	Number of HW From Regulatory Bodies	Health Workers / 1000 Population
Generalist medical practitioners	190	0.01	232	0.016
Specialist medical practitioners	67	0.005	102	0.007
Nursing professionals*	2,928	0.2	3420	0.24
Associate Nursing /midwives (Nurse/midwife Technicians)	968	0.07	5804#	0.41
Midwifery professionals*	-	-	3355*	0.24
Paramedical practitioners	1881	0.14	1,145	0.08
Dentists	-	-	19	0.0013
Dental assistants and therapists	211	0.02	58	0.0041
Pharmacists	293	0.02	77	0.0055
Pharmaceutical technicians and assistants	-	-	204	0.0014
Environmental and occupational health & hygiene workers	318	0.02	67	0.0048
Physiotherapists and physiotherapy assistants	9	0.0006	26	0.0018
Optometrists and opticians	8	0.0006	7	0.0005

Occupational categories /Cadres	2008	Ratios	2010	Ratios
	Number of HW from HRH Census	Health Workers / 1000 Population	Number of HW From Regulatory Bodies	Health Workers / 1000 Population
Medical imaging and therapeutic equipment operators	102	0.0070	54	0.0038
Medical and pathology laboratory technicians	473	0.03	193	0.0138
Medical and dental prosthetic technicians	-	-	3	0.0002
Community health workers/ (HSAs)	10,055	0.77	-	-
Health management workers/Skilled administrative staff.	3,072	0.23	-	-
Other health support staff	333	0.03	-	-
TOTAL	20,908		15, 016	

Source: Health Worker Census 2008 and Registers from Regulatory Bodies December, 2010.

#The figure for Associate midwives are the same as associate nurses (nurse technicians).

*The professional midwives/nurses get their qualifications after attaining their professional nursing qualification. The figure quoted for professional nurse/midwife (3420) is part of the professional nurse figure. The difference between the two figures (135) represents professional nurse without midwifery.

In Table 3.1, above as the most recent (December, 2010) categorization from the Nurses and Midwives Council indicates, there are 342 registered nurses (from the generic degree programme), 290 registered nurses (who upgraded themselves to diploma level), 2718 registered nurses with diplomas, 75 registered community health nurses, 14 registered psychiatric nurses, 214 enrolled psychiatric nurses, 488 enrolled community health nurses, 3592 enrolled nurse/midwives, and 2165 nurse/midwife technicians. It should also be noted that the last three rows are not registered by regulatory authorities and therefore there are blank spaces in the columns.

Table 3.2: Comparison of total health workers ratio to population per 100,000 in 2004 and 2009; Percentage Increase in health workers from 2004 to 2009

Cadre	2004		2009		2004 - 2009
	Total Staff	Ratio to Pop	Total Staff	Ratio to Pop	% Increase
Clinical Officer	594	5.00	958	7.33	61%
Dental Therapist	112	0.94	180	1.38	61%
Environmental Health Officer	353	2.97	436	3.34	24%
Laboratory Technician	160	1.35	380	2.91	138%
Medical Assistant	535	4.50	925	7.08	73%
Medical Engineer	20	0.17	18	0.14	-10%
Nurse	3456	29.09	4812	36.83	39%
Pharmacy Technician	120	1.01	221	1.69	84%
Physician	43	0.36	265	2.03	516%
Physiotherapist	10	0.08	40	0.31	300%
Radiography Technician	50	0.42	134	1.03	168%
TOTAL - 11 Cadres	5453	45.89	8369	64.05	53%

Cadre	2004		2009		2004 - 2009
	Total Staff	Ratio to Pop	Total Staff	Ratio to Pop	% Increase
TOTAL HSA (Est and Non-Est)	4886	41.12	10507	80.41	115%
TOTAL 11 CADRES + HSA	10339	87.01	18876	144.46	83%

Source: MoH/DFID, EHRP Evaluation Report, 2010

In Table 3.2 above, staffing ratios and trends between 2004 and 2009 show that there were tremendous increases, except for medical engineers which had drastically been reduced.

3.1.2 HRH Stock Trends for MoH and CHAM 2004 – 2010

The figures presented in Table 3.3 below were obtained by the EHRP Evaluation 2010 were based on the vacancy analysis provided by the HR Department of MoH and the CHAM Secretariat and these figures are higher than the figures from the stock for the entire sector obtained from the HRH Census 2008 and those from the regulatory authorities. These figures show that overall, staffing levels in all the 11 cadres had increased by 53% in MoH and CHAM since the salary top-ups were implemented in 2005, although not all the individual targets per cadre were met. With improved staffing arising from the EHRP, overall health centres were beginning to conform to the given staffing norms for the delivery of EHP in Malawi of 2/2/1 (i.e. 2 nurses, 2 clinicians, and 1 environmental health officer). These staffing norms had increased from 13% in 2004 to 45% in 2009.³⁴

³⁴ MoH/DFID, EHRP Evaluation Report, 2010, Annex I

Table 3.3: MoH and CHAM Staffing by Cadre, Actual vs Targets, 2004 - 2010

	2004		2005		2006		2007		2008		2009		2010
Cadre	TARGET	ACTUAL	TARGET	ACTUAL	TARGET	ACTUAL	TARGET	ACTUAL	TARGET	ACTUAL	TARGET	ACTUAL	TARGET
Clinical Officer	484	594	576	594	668	640	763	746	880	875	967	958	1054
Dental Therapist	109	112	144	117	180	136	219	192	280	167	301	180	341
Environmental Health Officer	302	353	403	363	506	376	614	397	768	410	921	436	1074
Laboratory Technician	90	160	134	125	178	178	222	310	272	334	321	380	369
Medical Assistant	593	535	685	519	777	566	869	670	981	740	1053	925	1145
Medical Engineer	22	20	27	20	34	19	41	23	48	15	53	18	58
Nurse	4147	3456	4419	3166	4691	3942	4963	4139	5234	4277	5505	4812	5776
Pharmacy Technician	105	120	116	134	127	98	142	192	165	197	187	221	209
Physician	122	43	142	95	163	142	184	148	205	199	205	265	205
Physiotherapist	17	10	34	24	50	20	69	15	89	35	108	40	127
Radiography Technician	56	50	72	40	89	67	109	97	135	109	160	134	185
TOTAL	6047	5453	6752	5197	7463	6184	8195	6929	9057	7358	9781	8369	10543
HSA (Established)		4886		4886		4664		4902		4826		4707	
HSA (Non-Established)		0		0		0		5153		5725		5800	
TOTAL HSA (Est and Non-Est)		4886	0	4886	0	4664	0	10055	0	10551	0	10507	0
TOTAL 11 CADRES + HSAs	6047	10339	6752	10083	7463	10848	8195	16984	9057	17909	9781	18876	10543

Source: Martin-Staple, Anne. Six-Year Human Resource Relief Programme: Year-One Implementation Plan, 2004

The actual figures in the above table were based on the Vacancy Analysis provided by HR Departments of MOH and CHAM Secretariat. The targets were taken from Anne Martin-Staple's Short-term consultancy report of December 2004.

3.2 Distribution of Health Workers by category/cadre

3.2.1 Gender distribution by health occupation/cadre

The analysis can be done on the basis of following questions: What are the categories/cadres where women are more/less represented? What is the gender situation in the labour market in both the public and/or private sector? Results of this analysis are as indicated in Table 3.4 below. The largest health cadres in the system are the nursing professionals most of whom are females.

Table 3.4: Gender distribution by health occupation/cadre

Occupational category/cadre	Total	Female #	% Female
Generalist medical practitioners	190	51	26.8%
Specialist medical practitioners	67	13	20.0%
Nursing professionals	2932	2683	91.5%
Nursing associate professionals	968	820	84.7%
Midwifery professionals	-	-	-
Midwifery associate professionals	-	-	-
Paramedical practitioners	1881	564	30.0%
Dentists	-	-	-
Dental assistants and therapists	211	43	20.4%
Pharmacists*	-	-	-
Pharmaceutical technicians and assistants*	293	115	39.2%
Environmental and occupational health & hygiene workers	318	33	10.4%
Physiotherapists and physiotherapy assistants	8	1	12.5%
Optometrists and opticians	-	-	-
Medical imaging and therapeutic equipment operators	102	7	6.9%
Medical and pathology laboratory technicians	473	70	14.8%
Medical and dental prosthetic technicians	-	-	-
Community health workers	10,055	3,865	38.4%
Health management workers/Skilled administrative staff.	2931	584	19.9%
Other health support staff	11726	5698	48.6%
TOTAL	32,155	14,547	45.2%

Source: Malawi HRH Census Report April, 2008

The table also shows that in Malawi, male health workers are more than their female counterpart. Males constitute 54.8% and the females 45.2% of the total health workforce. It is also important to mention that most medical doctors are males (73.2%) , most professional nurses are female (91.5%) and most associate nurses are female (84.7%). Females are underrepresented in all categories of the health workforce except in the nursing cadre in Malawi.

3.2.2 Health Worker Age distribution by occupation/cadre

The statutory retirement age for civil servants in Malawi is 60 years. However, due to human resource crisis the country has been facing for some decades now, government of Malawi has arranged and called back some critical cadres such as clinical officers and nurses to work on month to month contract or three-year contracts, some of whom are older than the stipulated age. This is however, a stop-gap measure as the country trains more and younger cadres it requires. While the system has been grappling with the problem of shortage of skilled health workers thereby invoking these stop-gap measures, it now has to address the problem of quality of those health workers in place. Table 3.5 below shows the existing workers by age group and cadre.

Table 3.5: Health Workers distribution by age group and cadre

Category of Cadres	<30 yrs	31-40 yrs	41-50 yrs	>51 yrs
Physicians generalists	55	48	24	18
Physicians specialists	7	6	3	8
Nurses	1,724	1,100	117	292
Midwives	-	-	-	-
Dentists	55	64	23	32
Pharmacists	76	88	57	20
Laboratory workers	123	145	92	12
Environment & public health workers	83	96	62	21
Health management and support workers	765	885	569	196
Other health workers	1923	3401	2756	1266
TOTAL	4,811	5,833	3,703	1,865

Source: Malawi HRH Census Report April, 2008

Note: Figures could not add up to 100% because some people did not indicate their date of birth during the census.

The Malawi health sector does not have adequate numbers of health workers. Even though production of health worker from basic health workers training institutions has increased, health worker demand is still high. With consummate experienced health workers retiring or leaving the service early, the health sector shall remain with young managers which may distort negatively strategic leadership necessary for improvements in the delivery of quality health services. There is need to balance these contradicting trends.

3.2.3 National and Zonal distribution by occupation/cadre

The HR census of 2008 indicates that the central west zone has the highest percentage of professional health workers as compared to other regions. The region has 47.9% of physicians, 24.9 of nurses, 28.8% of laboratory workers and 32.2% of health management staff. However, if population distribution among the zones is considered, the South East has large population but comparably lower health personnel to Central West Zone. Table 3.6 provides the details of the major variations in the distribution of workers by region.

Table 3.6: National and Zonal distribution of Health Workers

Occupational category/cadre	Total Number	% North	% Central East	% Central West	% South East	% South West
Physicians generalists	190	12.6	5.3	47.9	11.1	23.2
Physicians specialists	67	2.9	14.9	16.4	25.4	25.4
Nurses	3,900	16.4	11.7	24.9	19.8	27.2
Midwives	-	-	-	-	-	-
Dentists/Dental Assistants	211	18.9	6.2	32.2	22.7	19.9
Pharmacists/Technicians	293	14.7	10.6	29.0	22.9	22.9
Laboratory workers	473	15.2	7.8	28.8	19.9	28.3
Environment & public health workers	319	21.3	13.2	23.2	21.6	20.4
Health management and support workers	2,931	16.9	10.7	32.2	17.6	22.7
Other health workers	2,597	18.8%	13.7%	22.5%	19.3%	25.7%

Source: MoH, Human Resource Census 2008

3.2.4 Health Worker density Country-wide

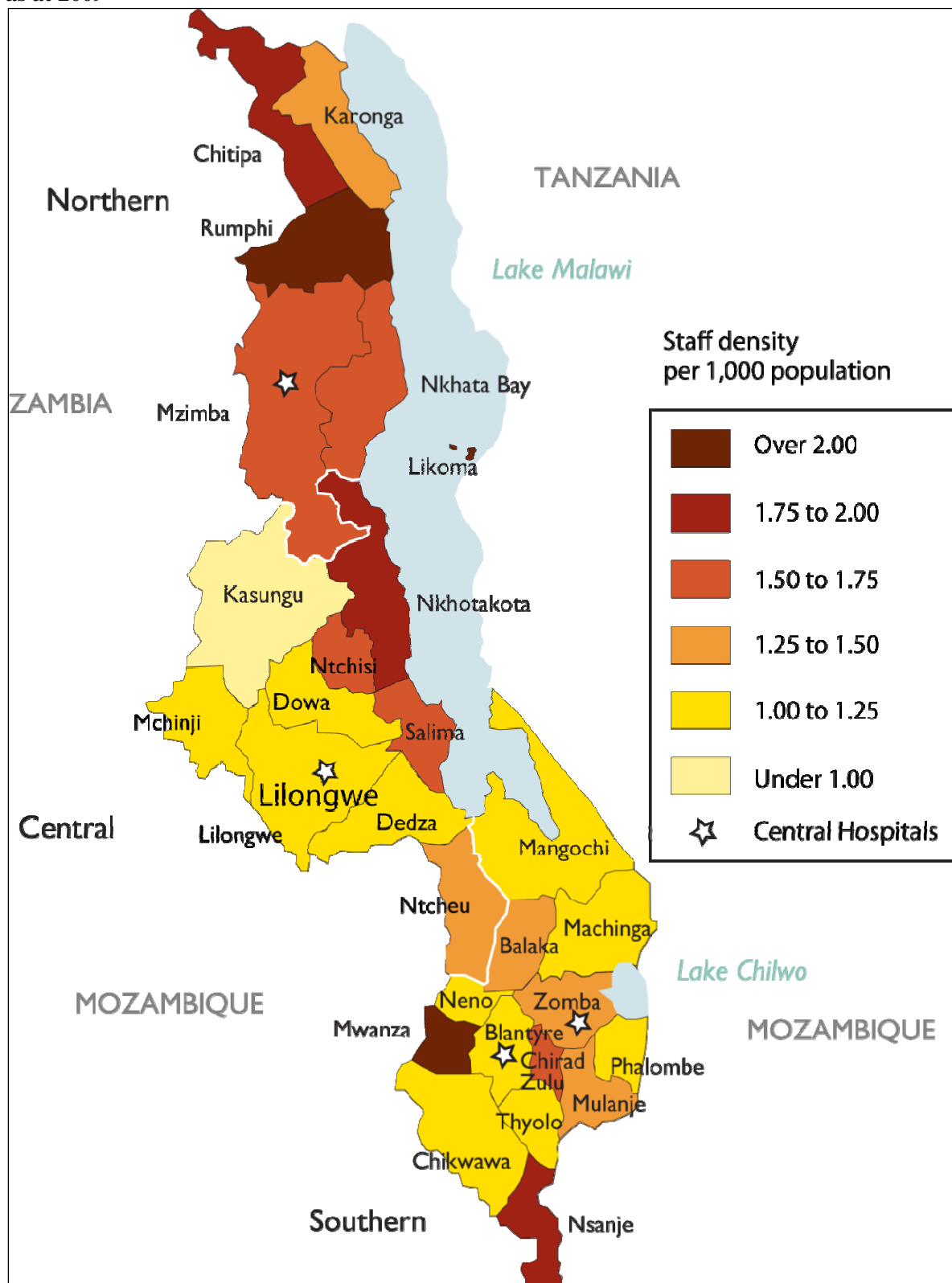
As of 2009, the majority of districts had a health worker density of between 1.0 and 1.5 per 1,000 population. There was a wide range of discrepancy in health worker density per 1,000 population, from 0.86 in Kasungu to 3.61 in Mwanza. Interestingly, the two most urban districts, Lilongwe and Blantyre, had the highest number of staff in absolute terms, yet due to high populations rank low on the distribution of health providers in terms of density with Lilongwe at 1.07 and Blantyre at 1.23 per 1,000 population, respectively. Health worker density has an important bearing on the effective delivery of health care services, especially delivery of EHP to rural and hard to reach/staff areas.

Map 2 below is showing the Map of Malawi in which the health worker density country-wide and at district level is illustrated.³⁵ Health workers at central hospitals are included within the staff densities for the district in which the hospitals are located. The central hospitals are denoted with a star in the Map below and are as follows: Kamuzu Central Hospital, Lilongwe; Queen Elizabeth Central Hospital, Blantyre; Mzuzu Central Hospital, Mzimba; and Zomba Central and Mental Hospitals, Zomba.³⁶

³⁵ MoH/DFID, EHRP Evaluation Report, 2010, p 60

³⁶ Ibid.

Map 2: Map of Malawi showing MOH and CHAM Health Worker Density per 1,000 population as at 2009



Source: MOH Monthly Top-Up Reports and CHAM Deployment Figures; map by authors, 2010

3.3 Geographical Distribution

3.3.1 Urban/rural distribution by occupation/cadre

Table 3.7 below shows that most of the health workers in Malawi are located in urban areas as indicated. For example, 77% of the general medical practitioners, 71% of nursing professionals, 79% of the paramedical practitioners and 70% of health management workers are in urban areas. In order to balance coverage of health service delivery to all areas, including rural and hard to reach/staff areas, government has to think of implementing incentive schemes or packages to attract and retain professional health workers in those areas.

Table 3.7: Urban/Rural distribution of Health Workers

Occupational category/cadre	Total Number	% Urban	% Rural	HW/ 1000 Pop in urban	HW/1000 Pop in rural
Generalist medical practitioners	190	77%	23%	0.1	0.02
Specialist medical practitioners	67	95%	5%	0.04	0.006
Nursing professionals	2928	71%	29%	1.6	0.3
Nursing associate professionals	968	60%	40%	0.5	0.09
Midwifery professionals	-	-	-	-	-
Midwifery associate professionals	-	-	-	-	-
Paramedical practitioners	1881	79%	21%	1.0	0.2
Dentists	-	-	-	-	-
Dental assistants and therapists	211	56%	34%	0.1	0.02
Pharmacists	-	-	-	-	-
Pharmaceutical technicians and assistants	293	58%	42%	0.2	0.03
Environmental and occupational health & hygiene workers	318	75%	25%	0.2	0.03
Physiotherapists and physiotherapy assistants	9	78%	22%	0.005	0.0008
Optometrists and opticians	8	87%	13%	0.004	0.0007
Medical imaging and therapeutic equipment operators	102	79%	21%	0.06	0.009
Medical and pathology laboratory technicians	473	63%	37%	0.3	0.04
Medical and dental prosthetic technicians	-	-	-	-	-
Community health workers	10,055	21%	79%	5.4	0.9
Health management workers/Skilled administrative staff.	2931	70%	30%	1.6	0.3
Other health support staff	11,726	70%	30%	6.4	1.04

Source: MoH HRH Census 2008

When examining the two, the Map of Malawi showing health worker density and Table 3.7 which shows urban/rural health worker distribution, what is observed is a high density in rural areas, where the population density is low. The number of health workers found in the rural areas where the population density is low compared with those found in urban areas where the population density is high, constitutes

a higher health worker density to population. The table is showing the urban/rural distribution of health workers, where most of them are community health workers, including HSAs, who are found in rural areas. The high health worker density that is being observed in rural areas largely comprises HSAs.

3.3.2 Sector Distribution by Health Occupation/Cadre

Table 3.8 is showing the public/private for profit and faith based organization distribution of health workers. It clearly shows that the public sector takes on the bulk of the health workers while the faith based organizations, some of which are private for profit organizations are second largest.

Table 3.8: Public/Private for profit/Faith based organization/private not for profit distribution of health workers

Occupational category/cadre	Total Number	% Public sector	% Private sector	% Faith based organization	% private not-for-profit
Generalist medical practitioners	190	43.5%	50.9%	2.8%	2.8%
Specialist medical practitioners	67	43.5%	50.9%	2.8%	2.8%
Nursing professionals	2928	64.5%	9.8%	21.5%	4.2%
Nursing associate professionals	968	64.5%	9.8%	21.5%	4.2%
Midwifery professionals* ¹	-	-	-	-	-
Midwifery associate professionals* ¹	-	-	-	-	-
Paramedical practitioners	1881	57.9%	13.6%	16.8%	9.9%
Dentists* ²	-	-	-	-	-
Dental assistants and therapists	211	57.9%	13.6%	16.8%	9.9%
Pharmacists	-	-	-	-	-
Pharmaceutical technicians and assistants	293	57.9%	13.6%	16.8%	9.9%
Environmental and occupational health & hygiene workers	318	87.7%	1.8%	8.0%	2.5%
Physiotherapists and physiotherapy assistants	9	67.5%	5.8%	16.8%	9.9%
Optometrists and opticians	8	19.5%	2.4%	70.2%	7.9%
Medical imaging and therapeutic equipment operators	102	57.9%	13.6%	16.8%	9.9%
Medical and pathology laboratory technicians	473	57.9%	13.6%	16.8%	9.9%
Medical and dental prosthetic technicians	-	-	-	-	-
Community health workers/HSAs	10,055	80.3%	1.4%	17.8%	0.5%
Health management workers/Skilled administrative staff.	2931	50.6%	12.4%	30.7%	6.3%
Other health support staff	11,726	19.5%	2.4%	70.2%	7.9%

Source: MoH, HRH Census 2008.

*1Midwifery is a second qualification for Nurses and so it doesn't stand alone. *2During the HR Census Dental Assistants and Therapists registered as Dentists. The Census did not also differentiate between Pharmacists and Pharmacy Technicians. See Annex 3 for clarification.

The picture depicted by Table 3.8 above is that most health workers work in the public sector (MoH). This can be attributed to many factors which include increased salaries, availability of allowances and

loans as well as staff accommodation, schools for their children, among others in the public sector. There is need for the private sector to begin playing an important role in attracting and retaining its health workers as well.

In Table 3.9 below is a representation of health worker distribution in the various professions in accordance with health facility ownership which shows the percentage share of each organizational category for each cadre.

Table 3.9: Detailed distribution of staff belonging to various professions according to facility ownership

Professions		Facility Ownership						Total
		Government	CHAM	NGO	Private	Statutory	Company	
All Staff	Count	21754	8399	1104	1705	506	298	33766
	% across owner	64.4	24.9	3.3	5.0	1.5	0.9	100
Physicians	Count	108	40	7	49	43	1	248
	% across owner	43.5	16.1	2.8	19.8	17.3	0.4	100
Clinical Officers	Count	404	117	69	74	17	17	698
	% across owner	57.9	16.8	9.9	10.6	2.4	2.4	100
Medical Assistants	Count	480	117	15	66	8	25	711
	% across owner	67.5	16.5	2.1	9.3	1.1	3.5	100
Nurses	Count	2872	956	187	320	88	27	4450
	% across owner	64.5	21.5	4.2	7.2	2.0	0.6	100
Technicians	Count	671	392	58	156	27	10	1314
	% across owner	51.1	29.8	4.4	11.9	2.1	0.8	100
Lecturers/Researchers	Count	43	40	9	0	9	1	102
	% across owner	42.2	39.2	8.8	0.0	8.8	1.0	100
HSAs*	Count	8070	1790	50	51	9	76	10046
	% across owner	80.3	17.8	0.5	0.5	0.1	0.8	100
Hospital Attendants	Count	3776	1660	39	120	12	74	5681
	% across owner	66.5	29.2	0.7	2.1	0.2	1.3	100
Public Health Workers	Count	286	26	8	0	5	1	326
	% across owner	87.7	8.0	2.5	0.0	1.5	0.3	100
Semi-skilled Workers	Count	72	259	29	9	0	0	369
	% across owner	19.5	70.2	7.9	2.4	0.0	0.0	100
Management/Support Staff	Count	4924	2994	614	855	287	65	9739
	% across owner	50.6	30.7	6.3	8.8	2.9	0.7	100
Not Cited	Count	48	8	19	5	1	1	82
	% across owner	58.5	9.8	23.2	6.1	1.2	1.2	100

Source: MoH, HRH Census, 2008.

*Overall, government has majority share of Health Surveillance Assistants (80.3%) are in the government sector so are public health workers (87.7%).

3.4 Technical Assistance

3.4.1 Technical Assistance at Central Level

It has been a standing policy of Government to utilize expert human resource from elsewhere, other than Malawi, where the country does not have qualified and experienced personnel to provide specialized services, to train local personnel in those services, and in some instances to fill in the gaps, in form of technical assistance, until such personnel are locally available. At central level, in MoH, these constituted specially recruited technical assistants (TAs) with support from donors who were recruited into the various departments and sections of MoH. Such technical assistance to the MoH focussed on areas of human resources policy, planning, management and development. A total of 23 consultants were recruited over the period 2004-2009 to provide TA to the MoH in various areas, with four of them in the areas of Human Resources. This included both long-term and short-term TA experts.

3.4.2 Technical Assistance in Central and District Hospitals

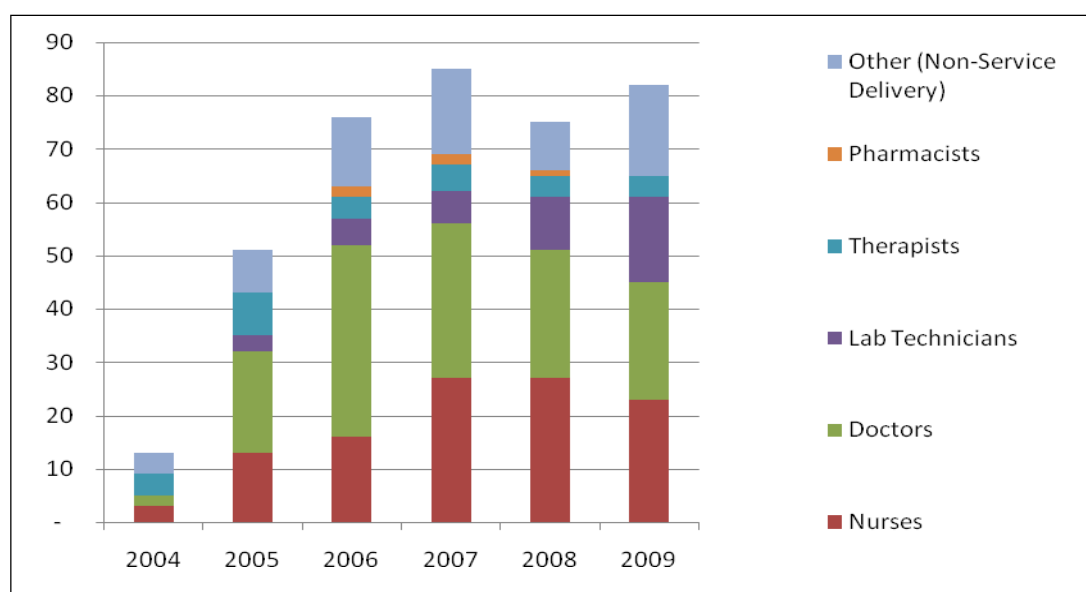
Under the EHRP, focused was on the use of TAs in form of international volunteer health workers was considered as an emergency stop-gap measure. At the time, the HRH crisis was so severe that the Ministry and donors felt that it was important to put in place a short-term mechanism to relieve the immediate need for implementation of short-term solutions while long-term solutions were being designed. The majority of these volunteers were specialists providing high-level services such as surgical procedures and ART provision and training. While Malawi has volunteer health workers from several countries, only the UN Volunteers (UNVs) were funded under SWAp. In addition to UNVs, a significant number of volunteers were provided by the Voluntary Services Overseas (VSO) Programme. Although the VSOs were technically funded by DFID, and not through the SWAp, the recruitment of these volunteers has been repeatedly cited as a component of the EHRP.³⁷ In addition, the volume and contribution of these volunteers was significant, so data on these volunteers is presented in this report under its relevant section below. The standard duration of volunteer contracts was for two years, with the additional possibility of extending the contract at the end of the period.

3.4.3 Contribution of UNVs and VSOs to Technical Assistance

A small number of UNVs were deployed in Malawi at the beginning of the EHRP in 2004. This number increased steadily over the course of the Programme. The VSOs were deployed beginning in 2004. The deployment of UNVs and VSOs began in 2004 with five and 13 volunteers, respectively. From the initial deployment of 18, the total number of UNVs and VSOs rose steadily to 132 in 2009. The VSOs had a skill mix that included not only health practitioners (physicians, nurses, pharmacists, lab technicians, and therapists), but also other skills (business management, IT, community and social development).³⁸ Figure 5 has the deployment of VSOs by cadre.

³⁷ See, for example, (1) Presentation by Matt Gordon, “Malawi’s Emergency Human Resources Programme: An Overview” made to DFID, 5 November 2008, Slide 8; and (2) Department For International Development. Improving Health in Malawi: £100 million UK Aid (2005/6–2010/11). Programme Memorandum, November 2004. London, DFID, 2004; Page 25.

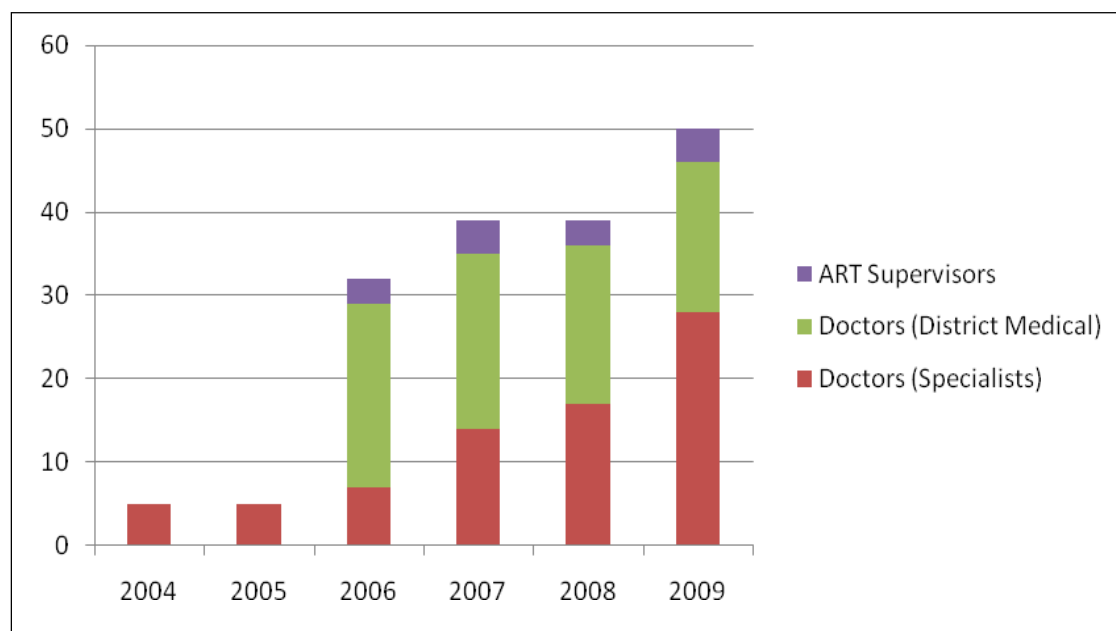
³⁸ No deployment data available from VSO office.

Figure 5: VSO Deployment, 2005 – 2009

Source: VSO Malawi Office

The UNV skill mix included ART supervisors, specialists, and general practitioners. Specialists were deployed to the major hospitals: Kamuzu, Queen Elizabeth, Mzuzu, and Zomba Central Hospitals. General practitioners were mainly deployed to district hospitals around the country. ART supervisors were deployed to the central hospitals and the Lilongwe Lighthouse. For the period 2004-2011, one of the main values of UNV Doctors in Malawi has been to alleviate the burden placed on the Malawian healthcare system (see Figure 6). With few or no doctors in place, UNV doctors have been filling major gaps. However, to promote sustainability the doctors are also active in training, mentoring and knowledge transfer. They give presentations, trainings and actively provide on the job demonstrations to clinical officers, medical interns and nurses. UNV Doctors are seconded to district and central hospitals around the country and are in some cases the only qualified doctors in the hospital except for the District Health Officer whose main task is management rather than clinical work. Currently there are 26 specialist doctors—in surgery, obstetrics and gynaecology, internal medicine and orthopaedics, dental surgery, anaesthesiology and pediatrics; five antiretroviral treatment (ART) supervisors and 18 general practitioners in the programme as can be seen in the list of UNV Doctors and specialists and where they are located in Annex 4.³⁹ Their location is also specified in Annex 4

³⁹ UNDP Malawi Office, 2011.

Figure 6: UNV Deployment, 2005 – 2009

Source: UNDP Malawi Office

3.4.4 Contribution by CIM Doctors to TA Arrangement

Other International volunteers include the German CIM Doctors. Since 1980, the presence of Centre for International Migration (CIM) was felt in Malawi under the auspices of GIZ (The German International Cooperation). CIM's "German Doctors" have been working in Malawi's Central Hospitals, mainly as part of international volunteers group. Most of them have been working as heads of department. Currently, there are 8 CIM doctors working in Malawi and a Chief Planning Officer based in MoH (SWAp Secretariat). All these are employed by the MoH or the University of Malawi with their salaries topped up from Germany. Their assignments last between two and six years. The Head of the Medical Dept of Zomba Central Hospital is the CIM focal person in Malawi. While a desk officer in Germany oversees the Malawi CIM programme, GIZ Country Office in Malawi supports the team logistically.

In Malawi CIM links up with partner organisations such as the MoH or the University of Malawi who need highly qualified medical specialists as employees. These CIM Integrated Experts contribute to pre-service and in-service training of Medical Doctors and Clinical Officers, to improvements in management, as well as in therapeutic and preventive medicine. They also support efforts of the Malawian government and international donors to combat HIV/AIDS. The Malawian medical professionals who accompany the CIM experts in their duties are expected to have acquired considerable knowledge and expertise by the end of the CIM doctor's tenure. Table 3.10 below shows what specialization the CIM experts/doctors have and where they are located in health institutions in Malawi.

Table 3.10: CIM Experts - ‘German Doctors’, and their Specialisation

Specialisation	Numbers in 2009	Location
Gynaecology and Obstetrics	2	KCH, ZCH
Surgery	2	COM, QECH
Anaesthesia/ICU	1	COM/QECH
Registrar	1	KCH
Internal & Tropical Medicine	2	ZCH, COM/QECH
Health Planning Specialist	1	MoH (Swap Secretariat)
Total	9	

Source: GTZ Health Programme, Malawi, 2011

3.4.5 Challenges and the Future of International Volunteers

International volunteers were motivated to help in the HRH crisis in Malawi and over 90% reported that they had a clear understanding of their role, which was to provide both clinical services and transfer skills. They felt they had a good orientation to their job. Due to staffing shortages overall, the emphasis of the volunteers’ work was on providing clinical services. The main obstacles faced by volunteers were increasing workloads and acceptance by local staff. Volunteers suggested that an orientation be provided for local staff so they could better understand the role of the volunteer. Close to 70% of the volunteers felt they had been effective in transferring skills. However, one obstacle was the frequent transfer of staff with whom they worked. Most volunteers preferred to extend their contracts if they were given this option as they appear to have enjoyed working in Malawi and learning about treatments for HIV/ADS and tropical diseases, including malaria, measles, etc., from their Malawian counterparts.

As an emergency mechanism, the use of international volunteers was necessary and successful in filling essential gaps in health services throughout the country. One of the challenges is maintaining up to date information on the availability of volunteer candidates, especially specialists.⁴⁰ While there was no formal exit strategy, the MoH and the UNDP have agreed that there will be a phase out of the UNV District doctors since the College of Medicine has started graduating new doctors who can fill these posts and develop their skills.⁴¹ Currently, Government acknowledges the fact that it will continue to require the services of volunteers focused in various specialty areas of medicine as Malawi’s production of doctors is still primarily for general practitioners.⁴² In future, Government should ensure that the gains made by the College of Medicine are maintained or increased, and that there is no gap in the supply of general practitioners in the country. Assuming the MoH funding stays at current levels, it presents an opportunity for examining strategic options for shifting from employing volunteer general practitioners to employing specialist doctors.⁴³

⁴⁰ “Capacity Development for Health” annual report, UNDP, September, 2009

⁴¹ Ibid.

⁴² Dr. Chithope Mwale, Director of Clinical Services, UNDP meeting, Mangochi, Malawi, April 12, 2010

⁴³ Ibid.

4 HRH Production

4.1 Pre-service Training and Education

4.1.1 Pre-Service Training from both Public and Private Institutions

The function of pre-service training for health workers is the responsibility of the Ministry of Education. The largest health training institution in Malawi is Malawi College of Health Sciences which produces paramedics and nurse technicians with the main campus situated at Lilongwe. The College has other Campuses distributed throughout the country. Training outputs of Nursing and Allied Health cadres in the country has been increasing from 2002 to 2009. The Government of Malawi has planned to gradually expand health training institutions to meet the current HR demand of professional health workers. Table 4.1 shows the share of training institutions between the public, private for profit and/or FBOs and the private sectors.

Table 4.1: Number of Training Institutions by ownership

Type of training institution	Ownership			Total
	Public	Private not for profit and FBOs	Private for Profit	
Medicine	1	0	0	1
Dentistry	1	0	0	1
Pharmacy	1	0	0	1
Physiotherapy	1	0	0	1
Laboratory	5	0	0	5
Nursing & Midwifery	2	10	1	12
Health sciences	1	2	-	3
Environnent & public Heath	3	-	-	3
Health Management	2	-	-	2
Total	17	12	1	29*

Source: MoH Training Unit, 2010

Most local health workers training schools face problems which include shortage of tutors, preceptors at practical sites, teaching equipment and classroom space. Government suspended funding for nurse technician training last year, which could have depleted the gains achieved from the implementation of the EHRP (2004-2009) but this has been resolved and government restarted funding the students (*MoH, EHRP Evaluation Report, 2010*).

Table 4.2: Graduates from Training Institutions by Ownership 2004–2009

	Cadre	2004	2005	2006	2007	2008	2009	TOTAL
CHAM	Nurse (+ Midwives)	294	367	381	376	379	406	2203
	Clinical Officer	27	17	19	26	25	34	148
	Medical Assistant	67	0	62	25	68	33	255
	Laboratory Technician	10	21	20	0	15	28	94
Total CHAM		398	405	482	427	487	501	2,700

	Cadre	2004	2005	2006	2007	2008	2009	TOTAL
KCN	Nurse (+ Midwives)	99	90	111	166	155	138	759
COM	Physician	18	13	25	40	46	31	173
	Laboratory Technician	0	0	0	0	14	18	32
	Pharmacy Technician	0	0	0	0	0	8	8
Total COM		18	13	25	40	60	57	213
MCHS	Nurse (+ Midwives)	182	154	107	126	169	155	893
	Clinical Officer	53	70	93	86	66	126	494
	Medical Assistant	89	89	98	114	117	120	627
	Laboratory Technician	16	13	15	45	13	85	187
	Pharmacy Technician	22	16	39	17	19	17	130
	Radiography Technician	9	14	27	19	24	18	111
	Dental Therapist	9	8	7	9	8	12	53
	Physiotherapist	0	0	0	0	0	0	0
	Environmental Health Officer	22	51	20	21	19	16	149
Total MCHS		402	415	406	437	435	549	2,644
TOTAL		917	923	1,024	1,070	1,137	1,245	6,316

Source: MCHS, COM, KCN, and CHAM Training Institutions.

In Table 4.3 there have been marked increases in the number of graduates from training institutions from 2004 to 2009. This was partly due to the request for increases in intakes or enrolment in the training institutions to mitigate the shortages in the 11 cadres of health workers, as part of the 6 year emergency training plan (elaborated below in section 4.5) and as part of the EHRP. While this effort was spearheaded by MoH, most CHAM institutions also took this as an opportunity to expand their facilities to accommodate the required numbers.

Table 4.3: Total Graduates by Cadre, 2004 – 2009

Cadre	2004	2005	2006	2007	2008	2009	TOTAL
Physician	18	13	25	40	46	31	173
Nurse (+ Midwives)	575	611	599	668	703	699	3,855
Clinical Officer	80	87	112	112	91	160	642
Medical Assistant	156	89	160	139	185	153	882
Laboratory Technician	26	34	35	45	42	131	313
Pharmacy Technician	22	16	39	17	19	25	138
Radiography Technician	9	14	27	19	24	18	111
Dental Therapist	9	8	7	9	8	12	53
Physiotherapist	0	0	0	0	0	0	0
Environmental Health Officer	22	51	20	21	19	16	149
Medical Engineer	0	0	0	0	0	0	0
Total	917	923	1,024	1,070	1,137	1,245	6,316

Source: MCHS, COM, KCN, and CHAM Training Institutions.

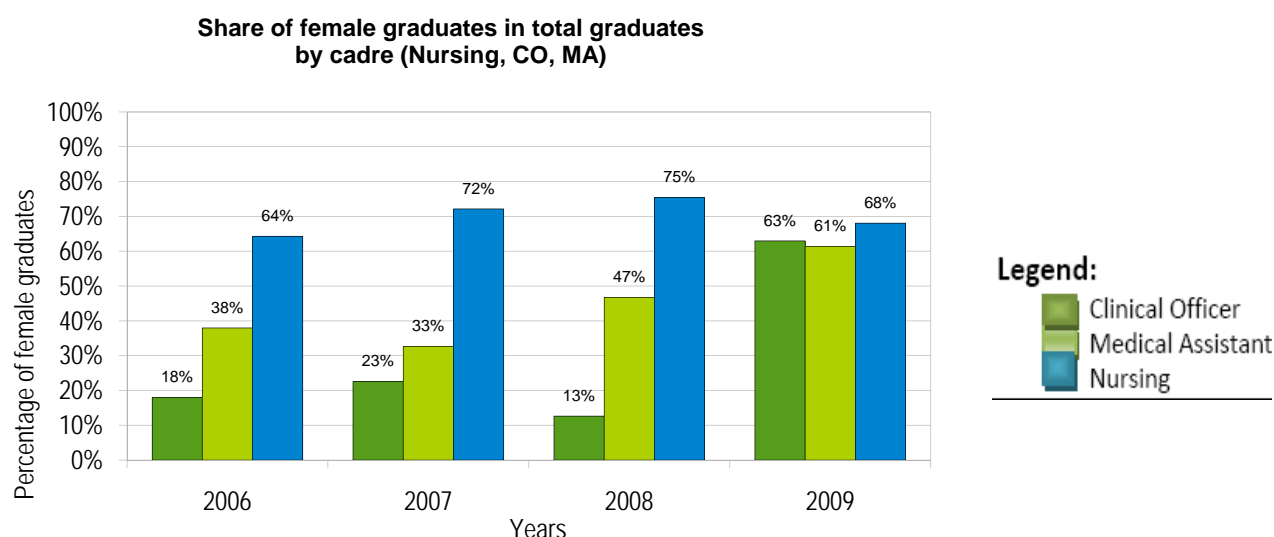
Table 4.3 shows the total number of graduates increased by cadre and this was partly responsible for the increases shown in Table 4.2. Except for the physiotherapists and medical engineers, the rest of the cadres

had positive increases in graduates from the institutions with the nurses (+midwives) topping the list. The results of this initiative included that total graduates from the four main training institutions (CHAM, MCHS, KCN, and COM) showed an overall increase, from 917 in 2004 to 1,277 in 2009; an increase of 39% (see Table 4.4). Physician graduates from the College of Medicine increased from 18 in 2004 to 31 in 2009; a 72% increase. Clinical Officers and Laboratory Technicians saw major gains, with the former almost tripling, and the latter increasing graduates by five times from 2004 to 2009.

4.1.2 Sex Distribution among Pre-service Graduates 2004 to 2013

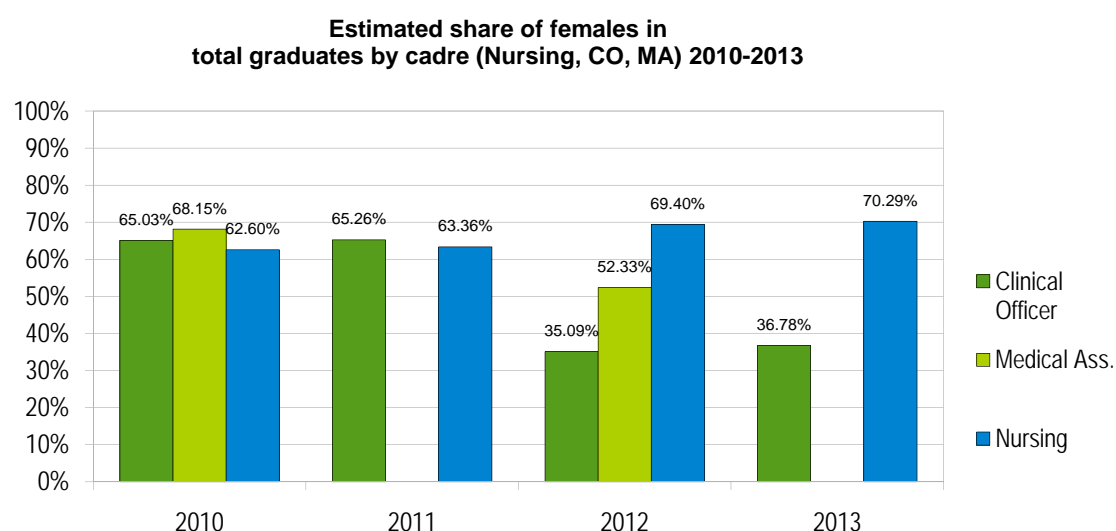
Overall, the majority of all recruits in the health professions (students of COM excluded) have been female throughout the years and this seems to be the trend in the coming few years as well. This is most particularly true to the different nursing cadres. Only graduates for Laboratory Technicians, Medical Assistants and Clinical Officers are dominated by males, especially in 2006-2007/2008 academic years. Otherwise, women graduates outnumber men among graduates of 2008/2009 and 2010 academic years. Figure 7 shows the share of female graduates out of the total graduates for the period 2006 to 2009.

Figure 7: Share of Female Graduates in Total Graduates by Cadre



Source: MoH/DFID EHRP Evaluation Report, 2010.

This tendency observed in nursing seems to be a general trend in other cadres as well as the share of female intakes in training programs for Laboratory Technicians, Medical Assistants and Clinical Officers is diminishing. Notwithstanding this trend, Figure 7 below shows the estimated share of female graduates when compared with male graduates between 2010 and 2013, with still a high share of female students constantly being reached in all nursing cadres. Nevertheless, a couple of other schools and colleges are predominantly admitting increased numbers of male applicants due to low scoring of their female competitors in science subjects.

Figure 8: Estimated share of Female Graduates from total Graduates by Cadre

Source: MoH/DFID EHRP Evaluation Report, 2010.

The Figure 7 & Figure 8 above show that the females occupy a majority share of nursing graduates relative to cadres as a good number are in clinical officers' training are males. It is also noted from Figure 8 that in estimates of 2011, there will be no female MA graduates, and also in 2013 due to having had no intake the preceding two years back.

4.1.3 Number of Graduates in Institutions 2004 - 2009

Table 4.4 is showing increases in the number of graduates, by cadre, between 2004 and 2009. This marked some improvement in the intake of health professions in training institutions, partly as a result of the Emergency Human Resource Programme (EHRP) and the Six Year Emergency Training Plan discussed under a separate section.

Table 4.4: Annual Numbers of Graduates, by Cadre, from 2004 to 2009

	2004	2009	% Change
Physician	18	31	72%
Registered Nurse/Midwives and Nurse/Midwife Technician	575	699	22%
Clinical Officer	80	160	100%
Medical Assistant*	156	185	19%
Laboratory Technician	26	131	404%
Pharmacy Technician	22	25	14%
Radiography Technician	9	18	100%
Dental Therapist	9	12	33%
Environmental Health Officer	22	16	-27%
Total	917	1277	39%

Source: CHAM, MCHS, COM and KCN Training Institutions. *Due to the graduation cycle of Medical Assistants at CHAM every other year, the graduate figure for 2008 was used in this calculation.

In addition to supporting training programmes at institutions, the Ministry included a nation-wide roll-out of HSA training, a 10-week course provided by the District Health Office in each district. New HSAs were recruited and trained in each district in an effort to reach the targeted ratio of 1 HSA per 1,000 of population. In line with the plan, HSAs were trained at the district level and by mid 2009, there are 10,311 HSAs either trained, in the process of training, or yet to be trained (MoH/DFID, EHRP Evaluation Report, 2010).

4.2 Post-Basic Training and Continuous Education

4.2.1 Short term training

The HRD Policy (MoH 2008) states that unless otherwise stipulated, short-term training is defined as any competency-based training whose duration is a minimum of one week and a maximum of three months. The Malawi government uses the following criteria in selecting staff to proceed on short-term training: The criteria include but not limited to:

- The training should be relevant to the staff member's field of work, identified performance gaps and be in line with the priority needs of public health sector;
- Must not be on the long term approved training programme;
- In the case of a member of staff having completed his/her post graduate studies, the officer must have served the public health sector for at least a period of one year upon return from their studies; and
- Priority will be given to staff members who have not attended any other courses during the previous year. This ensures that many staff members benefit from continuing professional development.

In-service continuous education training is implemented on the basis of an Essential Health Package (EHP). Facility based in-service continuous education is provided in a training package which establishes the basis for integrated training on the EHP which avoids disjointed training based on vertical programmes.⁴⁴ The DHOs are expected to determine the training needs of their staff rather than programme managers at the MoH headquarters doing so on their behalf. Furthermore, it is expected that the DHMTs have the capacity and are in position to contract training institutions to conduct such training. The Zonal Health Support Offices are supposed to coordinate and support training by the DHOs. Central level programme managers on their part, ensure that the training package is regularly updated and that it responds to current health demands.⁴⁵ Specifically, the HRD Policy is based on the priorities of the Joint Programme of Work (PoW) for the Malawi Health SWAp, 2004-2010 which revolves around the provision of the EHP as part of the Malawi Growth and Development Strategy (MGDS). While most in-service training is provided by MoH, and other service providers to their staff, NGOs also actively assist in the provision of in-service training. The follow up of in service training is weak at the district level and the planning for training is ad hoc without training needs assessment.

4.2.2 In-House Training

There has been a new innovation to the effect that where a significant number of candidates are eligible for the same training, management can identify an experienced local or international facilitator to design and deliver training on an in-house basis. Other than the issue of numbers, consideration for in-house training is also based on training cost, effectiveness of training and impact on organizational performance.

⁴⁴ Ministry of Health, Guide for EHP, 2004

⁴⁵ Ibid

It is planned that execution of In-house Training and Staff Development Plans shall commence with the shorter, cheaper and locally based courses. Candidates shall only proceed on further training after demonstrating their ability and commitment to application of new skills for performance improvement.

4.2.3 Long-Term Training - Definition and Eligibility

Unless otherwise stipulated, long-term training is defined as any training whose duration is more than three months. The following criteria are used in selecting candidates for long-term training. The criteria include, but not limited, to the following:

- Must be confirmed in service;
- Must not be more than 55 years of age;
- Must be medically fit and certified by a medical practitioner;
- Must have served the Ministry for at least a period of 3 years upon return from another long-term training; and,
- Must have demonstrated the ability to apply the skills acquired through previous training to improve individual, departmental and Ministry's performance.
- Candidates should only be recommended to undertake a training programme outside Malawi provided that same programme is not offered locally;
- Candidates will have to meet the requirements for particular programmes as may be stipulated from time to time both by the training provider and the sponsor.

Some post graduate training are being conducted locally, for instance, the College of Medicine offers a Masters Degree course in Public Health (MPH), and Kamuzu College of Nursing offers a Masters Degree course in Nursing.

Table 4.5: Post Basic Long-term Training Statistics (2007-2010)

PROGRAM	NO. TRAINEES	SPONSOR
Internal medicine	2	DFID/MoH
Ophthalmology	1	Sight savers
Obstetric and gynecology	3	MoH
Radiation oncology	2	MoH
Pediatrics	1	MoH
Plastic surgery	1	Taiwan/MoH
General surgery	2	Taiwan/MoH
Diagnostic radiology	1	MoH
MPH	5	Self /JICA/USAID/GAVI/MOH
MSc in Community health	6	MoH
Diploma in physiotherapy	2	MoH
Higher diploma in clinical medicine	1	MoH
Surgery ENT	1	MoH
MSc in public health	3	Australian government
MSc in nursing	7	MoH
MSc in environmental health	1	MoH
MSc in business administration	1	MOH

PROGRAM	NO. TRAINEES	SPONSOR
MSc in bio medical	3	MOH
MSc in Dental public health	1	MOH
MA procurement management	1	MoH
MA maternal and child health	1	MoH
MA reproductive health	3	MoH
MSc in health economics	3	GAVI
Postgraduate diploma in transfusion medicine	1	MoH
Total	53	

Sources: MOH, Training Unit, 2010

Table 4.5 shows that MoH is engaged in more staff capacity development with funding from both government and development partners to strengthen various technical and support areas so as to improve the delivery of health services in the country. While this is a welcome investment, the HRD Draft Policy (MoH 2008) notes that investments in training and staff development activities are not in response to clearly identified training needs due to lack of systematic analysis in the identification of training and staff development needs. Consequently, the HRD interventions have had limited impact in improving the quantity and quality of personnel needed to implement the Essential Health Package (EHP). Often, staff training is not based on well defined training plans that are linked to organizational goals and objectives, skill requirements, service priorities and programme needs of the public health service. Furthermore, the selection of candidates for training is often haphazard, with focus primarily centered towards professional workers.

4.3 Health Workforce Requirements

Information of health workforce requirements is not readily available in the country. However, the section of HR Management and Development had started completing projections using the Hall Model in the year 2008. This exercise was never completed. Table 4.6 shows the projections for health workforce requirements in the intermediate term based on the following assumptions that population growth will be constant, authorized staff establishment is fully operationalized, the production from health worker training schools increases, the disease and health care burden remain constant, attrition of health workers remain constant and that adequate mechanisms to attract and retain staff are put in place. These projections are still valid and can be seen as not too ambitious if government policy direction is steered towards improving the HRH situation in Malawi. The design of the SWAp 2 of the POW should therefore also take these projections into account.

Table 4.6: Projections for Health Workforce Requirements for the coming years

Cadre	2017	2017	2017
	Public	Private	Total
Specialized doctor	192	17	209
General doctor	295	76	371
Dentist	106	7	113
Pharmacist	102	13	115
Pharmacy Technician	426	223	649
Clinical Nurse Specialist	175	3,808	3,983

Cadre	2017	2017	2017
	Public	Private	Total
Professional Nurse	2,137	697	2,834
Nurse/Midwife	10,884	9,207	20,091
Spec Clinical Officer	245	121	366
Gen Clinical Officer	2,081	1,160	3,241
Dental Therapist	253	157	410
Medical Assistant	2,881	1,351	4,642
Environmental Health Professional	253	294	547
Allied Health Professional (Diagnostics)	1,690	1,069	2,759
Senior Admin/Managers	155	37	192
Skilled Degree (Non Med)	315	88	403
Health Related Deg Professional	234	361	595
Support staff (Clinical)	560	222	782
Health Surveillance Assistants	56,691	1,176	57,867
Other Support Staff	3,433	644	4,077

Source: These figures were calculated using the Intermediate Projection Model based on 2007 figures, MoH, HR Planning Unit.

4.4 The Six Year Emergency Training Plan

In response to the training needs, government and development partners developed a Six Year Emergency Training Plan in November 2001 which called for a substantial increase in training places in all institutions training health professionals. The plan developed with the principals of all the teaching facilities called for the filling of every available space in all teaching institutions, and also for dual annual intakes. The College of Medicine was categorized as a lower priority than the others in light of budgetary constraints. The plan therefore proposed that approximately 850 professionals would be trained every year for six years. The total cost of the increase for the six years was estimated at MK2, 005 billion based on actual expenditures at the time.

The initial training plan drafted at the inception of the EHRP focused on the four major training institutions: Malawi College of Health Sciences (MCHS), Kamuzu College of Nursing (KCN), College of Medicine (COM), and the network of CHAM training institutions.⁴⁶ Disbursements for payment of student fees began in 2006, and infrastructure payments began at different stages for each training institution. In general, the infrastructure projects got underway at a later stage and there are some which remain under construction. As a result of this, total enrolments at the four major training institutions showed increasing trends; however, the cessation of payment of student fees by the Government of Malawi in September 2009 subsequently caused a drop in enrolments in local health training institutions. At CHAM institutions, for example, enrolment dropped from 616 in 2008 to 87 in 2009. The September 2009 intake cohort did not begin as planned, and this class was postponed to April 2010.

⁴⁶ The 9 CHAM training institutions are as follows: Malamulo, Mulanje, Nkhoma, Holy Family, St. John, Trinity, Ekwendeni, St. Luke, and St. Joseph

Table 4.7: Summary of training outputs vs SWAp training targets (2004-2010)

No	Cadre	Targets output 5 yrs	Cumulative actual output for 5 yrs	Percentage achieved
1	Basic nurse technicians	2460	1849	75%
2	Registered nurses	360	230	64%
3	Medical assistants	750	886	118%
4	Clinical officers	450	486	108%
5	Technical support services	660	408	62%
6	Nurse midwives	240	571	238%
7	Post basic training	1080	1412	131%
8	Medical doctors	360	149	41%
9	Auxiliary nurses	3360	389	12%
10	Health surveillance assistants	4800	9087	189%
Total		14520	15467	106%

Sources: MOH, Training Unit, 2010

The Table 4.7 above shows that the number trained in some categories overshoot the targets for instance Health Surveillance Assistants trained are above the target by 89%, nurse midwives by 138 %, medical assistants by 18%, Clinical officers by 8%, and post basic long term training is up by 31%. However some categories did not reach their training targets and these include nurse technicians, registered nurses, technical support staff, medical doctors and auxiliary nurses. The picture this table shows indicates that the problem of shortage of health workers is far from being overcome and therefore the matter should receive priority attention in the design of SWAp 2 of the POW (2011-2016) to achieve the new and realistic targets.

4.5 Health Worker Attrition

4.5.1 Health Worker Inputs and Outputs into the Health System

It has already been mentioned that it was not easy to obtain clear and concrete data and information on attrition of health workers from the public health system in Malawi. In the absence of clear data on attrition, the EHRP Evaluation 2010 estimated attrition from an analysis of inputs and outputs into the public health system in Malawi.

Table 4.8 below shows the inputs and outputs of the health system, combining the results from recruitment of health workers and graduates from training institutions. The inputs into the health system considered under EHRP Evaluation 2010 were two-fold: recruitment of graduates from training institutions, and recruitment from the recruitment galas. The inputs represented by a steady yearly increase from the training institutions outputs, and the two recruitment galas that were instituted in 2006 and 2008, added more than 7,000 health workers into the system over the span of the EHRP (2004 – 2009) as indicated in the table below.

Table 4.8: Health Worker Overview and Attrition

	2004	2005	2006	2007	2008	2009
INPUTS						
Training Institution Graduates	917	923	1,024	1,070	1,134	1,245
Recruitment Galas	-	-	443	-	650	-
[A] Total Inputs	917	923	1,467	1,070	1,784	1,245

	2004	2005	2006	2007	2008	2009
STAFF						
MoH 11 Cadres	4,151	4,153	4,520	4,939	5,299	5,944
CHAM 11 Cadres	1,302	1,044	1,664	1,990	2,059	2,425
[B] Total Staff 11 Cadres	5,453	5,197	6,184	6,929	7,358	8,369
[C] Change in Total Staff 11 Cadres from previous year		(256)	987	745	429	1,011
% Change in Total Staff 11 Cadres		-5%	19%	12%	6%	14%
[D] Difference Inputs and Total Staff		1,173	(64)	722	641	773

Source: MoH/DFID EHRP Evaluation Report, 2010.

4.5.2 Attrition Rate from Analysis of Inputs and Outputs

From the increases in the 11 priority cadres of health workers at MoH and CHAM as shown in Table 4.8, one can obtain changes in the 11 cadre totals from year to year are shown in (C). This number represents the increase (or decrease) in absolute terms for MoH and CHAM staff. Attrition can therefore be estimated by taking the difference between total inputs by year, and total absolute change in staff by year, as in (D). The calculation assumes a one-year lag between leaving training institutions or galas and entering the public system. For example, the 914 outputs in 2004 would be expected to cause an increase of 91 in 2005, assuming both an attrition rate of 0% and an uptake of 100% of all outputs into the public sector.

If these assumptions were correct, the difference in (D) would be zero. However, the actual change in 2005 was a loss of 256 health workers, thus resulting in a difference of 1,173. This suggests a high attrition rate, because even if every single graduate entered the public system (which is unlikely), there was still a net loss of 256 people. The only year to see a decrease in this difference was 2006, in which an additional 987 people entered the public sector from the previous year, even though there were only 923 graduates from training schools. This would suggest additional inputs into the system that are not documented here. Therefore (D) here is used as a proxy in the absence of actual attrition data for 2004-2009. However, as mentioned earlier, this assumes that all outputs are entering the public sector, which is unlikely. The recruitment galas saw serious delays in deployment of candidates and the bonding schemes for students at training institutions were not always enforced.⁴⁷

⁴⁷ MoH/DFID, EHRP Evaluation Report, 2010, pp 42-43.

5 HRH Utilization

5.1 Recruitment

5.1.1 Health Professionals

The Health Service Commission (HSC) is responsible for the recruitment of health professionals in the Ministry of Health (MOH). The Health Services Commission enjoys delegated powers of the Public Service Commission which is responsible for all public servants. The positions for recruitment will depend on the district submissions coupled with the vacancy analysis undertaken by the MOH. The HSC receives the number of vacancies, the people eligible for these vacancies and the reasons why the vacancies fell vacant. If a post already exists, the Ministry of Health initially seeks authority from the Department of Public Service Management (DPSM) which is responsible for all public service employees' management. If the Ministry of Health wishes to create a new position and subsequently fill the post, the MOH shall initially seek establishment warrant from the Department of Public Service Management (DPSM). Once, authority to recruit is provided by DPSM, the MOH declare the vacancies to Health Service Commission (HSC) which advertise. The HSC sends applications to the Human Resources department in MoH which shortlists and sends back to HSC a shortlist of candidates for interviews. Results of the interviews are sent back to MOH which issues appointment letters.

New graduates from local health training institutions, often faces excessive delays in their appointment and placement due to poor planning and coordination between the Ministry and the training institutions. In an effort to overcome recruitment delays some new graduates are deployed and put on payroll without going through the recruitment process described. This has created a backlog of professional staff without personal files which makes it difficult to process and apply all conditions of service. Often newly appointed health workers accept employment offers without knowing where their positions are tenable within the Ministry. As such, sometimes suitably qualified and experienced candidates are reluctant to take up their positions with the Ministry. This has a negative impact on placements.

5.1.2 Common service staff

Central government maintains a pool of staff under certain departments which are deployed and serve in all government ministries and departments. Common service personnel vacancies are determined by parent departments in consultation with recipient ministries and departments. These personnel are recruited by the Public Service Commission and are deployed by parent departments. The Ministry of Health can however indicate its requirements of such personnel to a relevant department. Common service staff includes general administrators, accounts personnel, IT personnel, statisticians audit personnel, economists, and human resources personnel.

5.1.3 Subordinate class and Support staff

Subordinate workers are recruited by facilities. To recruit subordinate workers, facilities seek authority from Ministry of Health which subsequently seeks authority from Department of Public Service Commission. Once DPSM grants such authority, facilities are notified to undertake the recruitment.

5.1.4 Technical Assistance Recruitment

The Ministry of Health has a number of short and long technical assistance personnel provided recruited under bilateral agreements. The Ministry of Health identifies the need for such assistance and a development partner together with the MOH identifies the TA with requisite qualifications and

experience and recruits the TA. Details on technical assistance provided to the health sector are given below.

5.2 Promotions

5.2.1 The Process for Promotions

The process starts with the identification of a vacant promotional position and then the criteria for promotion of officers who have to be promoted is determined. The process of identifying promotional positions is done at MoH headquarters by the Human Resources Section in consultation with a relevant functional directorate. Using the statistics available at the MoH, the candidates' profiles by grade and year of appointment are compiled to establish those who meet the set criteria. Once promotional positions have been identified, authority to promote employees is sought from the Department of Public Service Management (DPSM). After authority is granted, the MoH sends the list of vacant promotional positions and names of serving officers who meet the criteria to Health Services Commission (HSC). The candidates who nearly meet the criteria are recommended for a waiver and automatically promoted. Where there are several candidates per position or the list of potential candidates is not provided, the HSC advertise vacant promotional positions and promotional interviews are conducted to find suitable candidates.

5.2.2 Criteria for Promotions

Table 5.1 below shows the government grading structure which is currently in use. The table has the list of grades in accordance with the old grading structure and its equivalents in the new structure in a hierarchical order from Grade A at the top to grade R at the bottom.

Table 5.1: Government Grading Structure

No	New Grade	Old Grade	Benchmark Titles
1	A		Head of the Public Service
2	B		Deputy Head of the Public Service
3	C	P2	Head of Ministry/PS
4	D	P2	Head of Department/Director
5	E	P3	Deputy Head of Department/Deputy Director
6	F	P5	Assistant Head of Department/Chief
7	G	P7	Principal Officer/Principal*
8	H	P8	Senior Officer/Medical Officer GP
9	I	PO/AO	Professional Officer/Entry of degree holder
10	J	SEO/STO	Senior Executive Officer/
11	K	EO/TO	Executive Officer/Technical Officer -Diploma holder
12	L	SCO/STA	Senior Clerical Officer/Senior Technical Officer
13	M	CO/TA	Clerical Officer/Technical Assistant – Entry certificate holder
14	N	SCI	Subordinate Class I
15	O	SCII	Subordinate Class II
16	P	SCIII	Subordinate Class III
17	Q	SCIV	Subordinate Class IV
18	R	Industrial Class	Labourers/cleaners

Source: MoH, Human Resource Division, 2011

*This title applied to all cadres, e.g. Chief Nursing Officer, Chief Clinical Officer, etc

Several factors are considered and used in executing a promotion from lower grades to higher grades and these include successful completion of a 2 year probation period, positive performance appraisal report, years of service or experience, qualification and above all existence of a promotional post in line with an individual job stream and career disposition. After the Health Service Commission (HSC) identification of promotable people, it sends the list to MOH to issue promotional letters. On average, it takes five (5) years for an individual to be promoted in the Malawi Public Health Service. Promotions from super scale (P4) and above are largely by appointment.

5.3 Deployment and Distribution Mechanisms

5.3.1 Deployment Mechanisms

A deployment/posting is guided by staffing need based on accurate information on staff distribution from a functioning personnel information system or a direct request from officer in-charges, a staff strength analysis based on staffing gaps between accepted and authorized staffing norms and staff in-post, congruency of the job/post and qualifications and experience, existence of an appropriate vacant post, place of promotion position, individual requests through their officer in -charge, changes in technology, emergencies/ disease outbreaks, changes in health delivery methods and restructuring of the health system which may result in either creation or deletion of a post and indeed the focus of National Health policy as well as requirements of the National Human Resources for Health policy and plan.

Deployment/posting/transfer ultimately depends on the exigencies of the service. The Ministry of Health (MOH) is responsible for national transfers of employees from one district to another including secondment to other health care providers. The District Health Officer (DMO) is responsible for intra-district staff deployment transfers. Common service staff postings are the responsibility of parent departments. All transfers are executed in a consistent, transparent and objective manner. The Ministry of Health developed a staff deployment policy in 2008 though there is no deployment plan. Deployment/posting/Transfer policy guidelines of the MOH are reviewed periodically in response to the needs of the health sector.

5.3.2 Distribution of Health Workers

Distribution of health workers in the Ministry of Health (MoH) involves ensuring there is continuous rotation of health workers premised on a two (2) year tour of duty in one area. However, the Ministry faces many challenges in staff deployment and distribution which include:-

- Non-adherence to rural and underserved areas deployment due to unavailability of social amenities including transport and good schools for children. This situation is compounded by lack of financial and non-financial hardship incentives including institutional accommodation.
 - Female health workers constant requests for re-deployment in order to follow spouses.
 - Health workers refuse postings to central hospitals (tertiary care facilities) due to heavy workloads and inadequate incentives like in-service training/continuous education⁴⁸.
 - The human resources section in MOH is inundated with posting requests despite its limited quantitative capacity.
 - For common service staff, MOH is unable to retain competent personnel as their deployment is outside MOH control.
 - In some cases deployment is not linked to one's skills and career progression.
- The above listed deployment challenges have resulted in skewed staffing with most health workers in urban centres and an apparent skill/staff mix distortion.

⁴⁸ Consultations with Mrs Nkhalamba of MoH, Human Resource Division, 2010

5.3.3 The Ministry of Health Career System

The MoH career system is determined by the Management Services Division of the Department of Public Services Management. It is a bureaucratic career system. The MoH has both vertical and horizontal bureaucratic career systems. Individual health workers can follow job steps vertically within one's functional job stream i.e. nursing services, clinical services, support services and preventive health. At the same time employees can grow horizontally i.e. one can become a hospital director within a tertiary hospital at a super scale grade equal to a grade at MoH headquarters. Paramedics can also attend super scale grades within their work place.

5.4 Remuneration mechanisms

5.4.1 Monthly Salary and Wages

One of the four remuneration mechanisms is the monthly salary or wage. All health workers get a monthly salary payment. The monthly salary is based on an individual's job grade. A job grade determined by the Department of Public Service Management is pegged to a salary level and there are automatic annual increments each year which form salary points or spines to the upper job grade. Those retiring get gratuity and monthly pension which is half the last salary.

5.4.2 Other Remunerations and Allowances

Government began a system of paying professional health workers a risk allowance and other allowances as a means of attracting, motivating and retaining them in their jobs. All professional health workers also get professional allowance. All staff on duty outside their work stations also get a daily allowance. Details of other allowances and incentives are given in the following section on health worker incentives.

5.5 Health Worker Incentives

5.5.1 The Incentive Package for Health Workers

The Government of Malawi, particularly the Ministry of Health, has been actively discussing the possibility of putting in place some form of incentive package for health workers in order to attract, motivate and retain them in the health sector in the face of an acute shortage of staff. A number of options were considered around financial and non-financial incentives to be part of the package and these are discussed below.

Malawi has used a mix of salary enhancement and non-financial incentives to retain and motivate health workers (Capacity Project, 2006). A study among midwives showed that midwives get attracted to stay in the public health sector by a generous retirement package (with a higher pension contribution of 25% from government which when compared well with the 15% from CHAM is better) to which workers are eligible only after serving 20 years; access to post-basic training; a flexible leave policy, and job security and country-wide job opportunities.⁴⁹

To supplement government efforts, CHAM secured donor support to improve staffing and attract and retain CHAM and government tutors, especially to hard to reach/staff CHAM institutions. The range of incentives included salary top-up to cover transport costs of visiting family and shopping; subsidizing utility bills and medical costs for tutors and their families; promoting CHAM tutors against a tutor career structure; free housing, free medical services, subsidized utilities; transportation for shopping, education and training opportunities; loan schemes; improved supervision, opportunity

⁴⁹ Aukerman, 2006, Mackintosh, 2003

to be mentored and provision of communication systems. Some rural CHAM institutions also offer health worker's allowances for school fees for their children; hardship allowances, responsibility allowances and duty allowances. This has been a generous range of incentive packages given to health workers to attract, motivate and retain them in their jobs, but not systematically implemented.

5.5.2 The Specially designed 52% Salary Top-up Allowance

In 2004, government developed the Emergency Human Resource Programme (EHRP) to address the critical Human Resource shortage problem. The EHRP used government funds and donor support, largely from DFID, to offer a 52% salary top-up for public health workers and to attract and hire emergency health workers to supplement available staff in the short term, in what was called recruitment galas, and created the Health Service Commission to facilitate this beefing up of health staff.⁵⁰ The salary top ups were also used as a campaign to attract nurses from the private practice.

At the moment a salary top-up allowance is paid to all health professionals working in government health institutions graded 'M' and above. Currently, all the eleven cadres of health workers are eligible for the allowances, which include the Health Surveillance Assistants (HSAs). These range between the grades 'D' and 'M' of the Malawi Civil Service including, physicians, nurses, clinical officers, medical assistants, laboratory technicians, pharmacy technicians, radiography technicians, dental therapists, physiotherapists, environmental health officers, medical engineers. The determination of the allowance was based on approximately fifty-two percent of an individual's monthly basic pay. The allowance is subject to income tax. After tax this amounts to a real increase of only 20%. A new initiative has been agreed to band allowances and salary so that one only gets a salary which has been absorbed by the government as part of the normal budget. Other non-financial incentives included establishment of career schemes to improve professional opportunities for all cadres; free post-basis/post-graduate training to government health sector workers; job opportunities for female health workers in health facilities all over the country, if their spouses get transferred (Mackintosh, 2006) and in some instances free meals served to health workers on duty.

5.6 The work environment

The work environment can be divided in two major geographical areas of rural and urban with rural work environment unattractive to health workers. Maintenance of infrastructure and equipment especially in rural areas leaves a lot to be desired most basic equipment is not available. Some places have nothing or little social amenities such as schools for children. There is improvement in the availability of water, electricity and communication facilities put at 76%.⁵¹ Some facilities are located in hard to reach rural places. Most facilities have adequate essential drugs and availability is put at 95% (MOH, Progress on SWAp Indicators: 2004-2010, October 2010). Both the MOH and Zonal offices offer technical supervision to districts facilities and the number of supportive supervision is put at 77% in 2010 (MOH, Progress on SWAp Indicators: 2004-2010, October 2010). Management styles are culturally sensitive and engender proper work environment and the MoH continuously trains its managers in good management and leadership.

5.7 Supervision systems and mechanisms

The Ministry of Health has management structure which includes MoH headquarters, Central Hospitals, Zonal offices, the District Health Office (DHO) which has a District Health Management Team (DHMT) and health centre. The Ministry of health headquarters provides policy and strategic supportive supervision to zonal offices and district health offices. Zonal offices provide technical supportive supervision to the district health officers who in turn provide operational supportive

⁵⁰ WHO, African Regional Report 2006

⁵¹ MOH, SWAp Progress Report on Indicators: 2004-2010, October 2010

supervision to district health workers. Both the MoH and Zonal offices offer technical supervision to districts facilities and the number of supportive supervision is put at 77% in 2010. Health centre personnel supervise health clinics and health posts. At central levels service checklists were developed with the participation of all concerned stakeholders. Checklists are used at each management level for supervision. Timelines or time deadlines are all stipulated for accomplishment of certain activities and used as a mechanism for supervision.

At individual level open performance appraisal system is used, although sparingly. A line manager agrees targets with a subordinate over a certain period of time. The supervision of that individual is based on the targets set. This system is yet to be developed further and improved when the performance management system has been institutionalized as a means of measuring health worker performance with requisite rewards and sanctions.

6 Governance for HRH

6.1 HRH policies and plans

Public health workers are public servants and their management is under the Department of Public Service Management (DPSM) which formulates and articulates all strategic public human resources policy. The Department of Public Service Management (DPSM) is the custodian of Malawi Public Service Regulations (MPSR) which provides guidance in all public servants management. It all provides policy guidelines on public service human resources planning and training. For instance the Department of Public Service Management determines any department or ministry staffing establishment which in itself is a staffing policy document and forms the basis for any realistic staffing projections. The Ministry of Health is responsible for operational policies which reflect health service needs and in line with general DPSM human resources policy.

It is the responsibility of the Public Service Commission to recruit and sanction disciplinary action. The Civil Service has a grievance handling procedure that gives an opportunity for employees to table their grievances with the highest level of management. In the case of Ministry of Health, the Public Service Commission has delegated some of its responsibilities to the Health Service Commission (HSC). The Health Services Commission was established in 2003. Among others, it is responsible for:

- Recruiting, appointing and promoting health workers;
- Handling disciplinary controls over health workers;
- Setting salaries for health workers; and
- Setting working conditions for health workers.

However, there is a lack of clarity regarding the Act that established the HSC and the powers it invests in the HSC and this has resulted in some confusion regarding the respective roles of the MoH and the HSC in addressing the HR issues in Malawi. The HSC consists of 7 commissioners and the Chairman. The HSC also evaluates health workers' performance. For instance, it has just concluded a survey in selected health facilities in the country to determine the problems health workers encounter and how these might be addressed. The main findings emerging from this survey indicate that staff dissatisfaction with the conditions of service- i.e. level of remuneration, working environment, supervision and management styles still leave a lot to be desired.

6.2 HRH Policy development, planning and management

6.2.1 Human Resources Capacity for Policy Development

The HR function is still weak at all levels. The HR division for HR management and development at the MoH Headquarters' level is grossly understaffed and lacks requisite skills for HRH policy development and planning. Efforts are being made by the government of Malawi to recruit and train key staff to drive the HR agenda.

Responsibility for Human Resources is still held centrally at government level. Human resource planning capacity at the district level is however still poor. Districts are run by District Assemblies, but the HR planning and management function still rests with the DHO and the human resources officers at district health office level hold very junior grades and this makes it more difficult for them to implement changes, when many of the staff they deal with are senior to them. There is a need for people with appropriate authority at district level to handle decentralisation challenges.

6.2.2 Health Policy Development

The Ministry of Health undertook to develop the National Health Policy to drive the operations of the sector. Those involved in its development included, but not limited to officers working in the public and private health training institutions, regulatory bodies, Non-Government Organizations (NGOs), traditional medicine board, civil society organizations and the co-operating partners.

The WHO Country Representative provided the direction on policy development, while the various Technical Working Groups and the Task Forces of the MoH facilitated the whole process of developing the National Health Policy. The Health Sector Strategic Plan is still in the draft form. The Ministry is still following the POW 2004-2010 as the overall guide for its strategic operations.

6.2.3 Deployment Policy

The draft National Health Sector Deployment Policy (2008) is aligned to the provisions of the Malawi Public Service Act, Malawi Public Service Regulations, Human Resource Development Policy for the Public Health Sector, the National Gender and HIV/AIDS Policies. The Policy is also based on the priorities of the Joint Programme of Work (PoW) for the Malawi Health Sector Wide Approach (SWAp), 2004-2010 which revolves around the provision of the EHP as part of the Malawi Growth and Development Strategy (MGDS). This policy is yet to be launched.

6.2.4 The Human Resource Development Policy

The draft HRD Policy (2008) is in line with the provisions of the Malawi Public Service Training and Development Policy and the Malawi Public Service Act. The policy is also informed by training policies from the public health sector within the SADC region, in particular South Africa and Namibia and SADC HR Strategic Plan (2006-2019). Specifically, the HRD Policy is based on the priorities of the Joint Programme of Work (PoW) for the Malawi Health Sector Wide Approach (SWAp), 2004-2010 which revolves around the provision of the EHP as part of the Malawi Growth and Development Strategy (MGDS). This policy too is yet to be launched.

6.2.5 Human Resources for Health Strategic Plan 2007-2011

This recent strategic plan addresses the broader HR requirements of the public health sector and adopts a global perspective of HRH covering all cadres of health workers as defined by 2006 WHO Annual Health Report. The strategic objectives set out include (1) building capacity for HRH training and development to ensure constant supply of adequate, relevant, proper mix and competent health workforce; (2) attaining the right HRH numbers and skills mix to populate the health sector taking into account the available resources; (3) creating, maintaining and using a strong knowledge and information base for evidence HRH decisions; (4) managing HRH efficiently and effectively, with the aim of attracting and retaining sufficient, equitably distributed, well motivated, empowered and productive workforce; (5) developing capacities for HRH policy stewardship and evidence based planning, monitoring and evaluation; and (6) building sustainable partnerships and strengthening co-ordination among HRH stakeholders including community and local assemblies.

To achieve these strategic objectives, ten core strategies have been developed for implementation and these include:

- Training and staff development
- Improving recruitment
- Developing mechanisms for deployment
- Improving retention
- Performance management and career development
- HR policy and systems development

- Communication and information sharing
- Improving tools for research and development
- Management and leadership development
- Coordination and harmonization of HRH mechanisms

6.2.6 Six Year Emergency Training Plan

The Six Year Emergency Training Plan developed in November 2001 called for a substantial increase in training places in all institutions training health professionals. The plan developed with the principals of all the teaching facilities called for the filling of every available space in all teaching institutions, and also for dual annual intakes. The College of Medicine was categorized as a lower priority than the others in light of budgetary constraints. The plan proposed that approximately 850 professionals would be trained every year for six years. The total cost of the increase for the six years was estimated at MK2, 005 billion based on actual expenditures at the time.

6.3 Professional Regulatory Mechanism

6.3.1 The Health Regulatory Mechanism

The responsibility to register with professional bodies when required by law or regulations lies exclusively with the employee. However, all practicing health workers in the Malawi are required by law to register with the relevant Professional Councils at a fee.

There are three regulatory Professional Councils namely:

- The Medical Council
- The Nurses and Midwives Council and
- The Pharmacy, Medicines and Poisons Board

Each of these councils has an appointed full time registrar that is a secretary to the council and as such participates in the deliberations of the council but has no right to vote. Currently government is contemplating a merger of the three professional bodies into one body.

At the moment, some of the regulatory councils do not provide accreditation to health workers for continuous professional development (CPD). As a result, the efforts of health workers in involvement in CPD through seminars, and workshops are not recognized. There is need for improvement of access to professional journal for CPD. The licensing authorities for health care professionals should seriously consider mandatory CPD credits for re-certification.⁵²

6.3.2 The Medical Council of Malawi

The Medical Council of Malawi is a non-profit making statutory body wholly sub vented by the Government which was established by the Medical Practitioners and Dentists Act No. 17 of 1987. The Council became operational in February, 1988. The overall objective of the Council is to set and maintain standards of health care in relation to premises, equipment and supplies as well as the qualifications and credentials of personnel employed at health establishments including their behaviour and conduct towards patients and clients.

The functions of the Medical Council include to assist in the promotion and improvement of the health of the population of Malawi; to control and exercise authority effecting the training of persons in, and the performance of the practices pursued in connection with the diagnosis, treatment or prevention of physical or mental defects, illness or deficiencies in human beings; to exercise disciplinary control over the professional conduct of all persons registered under the Medical Practitioners and Dentists

⁵² Adamson Muula et al, Access to Continued Professional Health Education in Blantyre, Malawi, COM, June 2003.

Act and practicing in Malawi; to promote liaison in the field of medical training both in Malawi and elsewhere, and to promote the standards of such training in Malawi; and to advise the Minister of Health and information acquired by the Council relating to matters of public health. In general, the Medical Council of Malawi is responsible for registration and maintenance of a database of registered medical and dental practitioners as well as licensing of medical and dental practitioners. Its responsibilities also include coordination and regulation of registration of clinical services in the country.

6.3.3 Nurses and Midwives Council of Malawi

The Nurses and Midwives Council of Malawi was formed by the Act of Parliament in 1995 is a sole regulatory body mandated by The Act of Parliament Cap 36:2 to regulate training, education and practice of all nursing and midwifery services. In liaison with the Ministry of Health, the Council advocates for increase of nurses and midwives in the country to ensure provision of quality nursing and midwifery services.

The Nurses and Midwives Council has an important role in the development of human resource. The Council carries out the following functions to fulfil its role in HRD.

- Gives approval of nursing/midwifery colleges to train nurses and midwives
- Sets standards for nursing/midwifery education and practice
- Sets Monitoring and evaluation criteria of the training institutions and checks if the set standards are being followed to ensure compliance
- Sets and conducts licensure examinations for the nurses and midwives that have undergone training. The council gives certificates to those nurses/midwives who pass the licensure examinations.
- Keeps the registers for all nurses/midwives that are licensed and practicing
- Conducts monitoring and evaluation of health facilities to ensure that standards of care are adequately complied with.

Available records indicate that by end of June 2008, the Council had registered a total of 8,360 nurse/midwives. A total of 3,066 are registered nurses while 5,294 are enrolled (nurse/midwife technicians).

6.3.4 The Pharmacy, Medicines and Poisons Board

The Pharmacy, Medicines and Poisons Act, 1978 and the Pharmacy, Medicines and Poisons (Fees and Forms) Regulations 1990, empower the Pharmacy, Medicines and Poisons Board be established by the Ministry of Health to regulate, register, and control the quality of drugs in Malawi. The Board is also responsible for the registration, ethical control and training of pharmacy professionals. The Board has a Medicines Committee for scheduling and registration of drugs. Drug registration, quality control testing and inspection service were introduced after an assessment of the medicines and poisons.

The Central Medical Stores (CMS), which comes under the supervision of the Controller of Health Technical Services of the Ministry of Health, is responsible for procurement of drugs in the public sector. Procurement in the public sector is done by means of open tender and direct purchase from wholesalers abroad and in the country. There is also donors' supply in kind. There is an official essential drugs list, the Malawi Essential Drugs List, developed in 1991 which was updated in 2009. The list is being used for procurement of drugs for the public sector.

In general, therefore, the Pharmacy and Poisons Board of Malawi is responsible for registration and licensing of pharmacy practitioners. It also helps in regulating the quality and distribution of drugs in the country and inspects the inflow of these drugs to ensure they are of quality and valid.

6.4 Human Resource Information System in Ministry of Health

A Human Resource Information System (HRIS) was established in 2009 to provide a snapshot of existing human resources for health (HRH) situation, but also forms a foundation for making human resources projections and estimating the gap between current HRH position and projected targets. The human resources information system is also supplying information which is assisting in HRH management activities and decisions such as deployment of health workers.

The Human Resource Information system captures Ministry of Health personnel only. The HRH information is generated by cost centre. Health centres generate HRH data for personnel under their jurisdiction and send to the District Health Office which updates its computerized HRH data base. Programs and Central hospitals are responsible for updating HRH data of personnel under their jurisdiction. District Health Offices (DHO), Programs and Central Hospitals have data entry clerks. The District Health Offices (DHOs), Programs and Central hospitals are connected to headquarters human resources section via an HRH information system network and where the network is not working DHOs, Programs and Central Hospitals provide updated HRH information each month end using a memory stick. The human resources section in MOH consolidate cost centre reports and produce quarterly HRH situation reports which are presented to MOH management and put on the HRH information system network for DHOs, Programs and Central hospitals to access as a way of feedback .

The HRH data on the human resources information system are listed by cost centre which include central hospital, district and program. The HRH information variables include cadre classification, qualifications/skills and employee file consisting of employee profile. Other data sets available include staff establishment by facility, list of post titles with salary equivalent, staff leave, attrition, training which include student's enrolment. Products of the human resources information system include employ reports, vacancy analysis report, total MOH workforce and attrition, salary and staff geographical distribution, Gender and age distribution, staff leave report by cost centre, total number of MOH staff and detailed training summary report.

The human resources information system faces challenges which include inadequate computer skills among HRH personnel at all levels of the health system making it difficult to update the database, delays in cost centre HRH officers to update and send information to MOH headquarters, inadequate supervision from DHOs to ensure HRH officer update their data base and a VSO officer who used to oversee the human resources information system is no longer available and there is no one to carry on this role.

6.5 HRH research

Most of the HRH research programmes are initiated outside the Ministry of Health, initiated by academic and research institutions, such as the College of Medicine and Centre for Social Research, and funded by cooperating partners such as GIZ, DFID and WHO. Funding is normally provided by the cooperating partners together with the Government of Malawi. At the moment most HRH research does not inform HRH policies because of capacity limitations.

6.6 Stakeholders in HRH

6.6.1 The Public Health Sector Stakeholders

There are a number of key stakeholders in HRH in the public health sector. These include those in Government, the donor community, faith based organizations such as CHAM and the private sector. The list includes the government institutions and ministries with health-related responsibilities such as

the Ministry of Health, Ministries of Finance, Education, Gender and Child Development, the health regulatory authorities and non-governmental organizations (NGOs).

6.6.2 Non-Governmental Organizations

Non-Governmental Organizations (NGOs) in Malawi's health sector include international and national bodies scattered all over the country. This is partly a by-product of the need for donors to channel large proportions funds to the Malawian population through non-government health providers rather than the MoH per se as some donors, particularly certain bi-lateral donors, believe these providers yield more immediate and visible results as they work close to the population.

6.6.3 Private Practitioners

Malawi has a fast growing private-for-profit sector. A small number of clinicians and paramedics provide private health care services. The private-for-profit modern health care service is mostly urban-based. Currently this group is expanding both in numbers and geographical distribution to rural areas. One of the reasons behind this small private-for-profit sector is the government's policy, which until 1987 did not allow health personnel to undertake private practice. Since then doctors and paramedics have been allowed to undertake private practice. Most doctors dispense medicines purchased from commercial companies themselves, or may issue prescriptions to be filled by the growing number of modern pharmacies, which are limited to urban areas.

Annex 1: Important Health Indicators

Indicator	1999-2010*
Projected Total Population 2010	14.1 million
Projected Total Population 2009	13.4 million
Total population (NSO 2008)	13.1 million
Infant mortality rate per 1,000 live births (DHS 2010 Preliminary Report, NSO)	66/1,000
Under five mortality rate per 1,000 live births (DHS 2010 Preliminary Report, NSO)	112/1,000
Total fertility rate 2010 (DHS 2010 Preliminary Report, NSO)	5.7
Total fertility rate 2009 (Welfare Monitoring Survey 2009, NSO)	5.2
Life expectancy at birth (NSO, Population Projections, 2010)	52.5 years
Males	51.03
Females	54
Maternal mortality rate/100,000 live births (MICS, 2006)	807/100,000
HIV Prevalence Rate (MoH SWAp Progress Report, 2010)	12.3 %
Total HIV-positive population (NAC, 2003)	700,000 – 1,000,000
Malaria in-patient fatality rate (MoH SWAp Progress Report, 2010)	3.2 percent
Children under weight (MoH SWAp Progress Report, 2010)	16 per cent
Facilities with functioning water electricity and communication (MoH SWAp Progress Report, 2010)	76 per cent
Supervision visits made to health facilities and feedback provided (MoH SWAp Progress Report, 2010)	77 per cent
Timely reporting of data (MoH SWAp Progress Report, 2010)	93 per cent
Budget allocated to health sector as a percentage of Govt. Budget (MoH SWAp Progress Report, 2010)	12.4 per cent
Recurrent budget funded and utilized annually (MoH SWAp Progress Report, 2010)	99.8 per cent
Drug day availability ((MoH SWAp Progress Report, 2010)	95.6 per cent
OPD service utilization ((MoH SWAp Progress Report, 2010)	1,316/1000 pop
Level of satisfaction with service ((MoH SWAp Progress Report, 2010)	
Rural	76.4 per cent
Urban	83.6 per cent
Pregnant women and children sleeping under treated bed nets ((MoH SWAp Progress Report, 2010)	
Pregnant women	50 per cent
Children	80 per cent
Pregnant women receiving complete ARV prophylaxis ((MoH SWAp Progress Report, 2010)	66 per cent
Percentage of deliveries conducted by Skilled birth attendant (MoH SWAp Progress Report, 2010)	58 per cent
EHP coverage (MoH SWAp Progress Report, 2010)	74 per cent
CPR (DHS 2010 Preliminary Report, NSO)	46 per cent
Eligible pregnant women receiving IPT (Malaria Indicator Survey, 2010)	60 per cent
Under five children receiving malaria treatment according to national policy within 24 hrs of onset (MoH SWAp Progress Report, 2010)	27.6 per cent
Facilities with minimum PMTCT package (MoH SWAp Progress Report, 2010)	100 per cent
TB case notification rate per 100,000 (MoH SWAp Progress Report, 2010)	173/100,000
TB cure rate (MoH SWAp Progress Report, 2010)	86 per cent
Health hospitals providing Comprehensive EmONC (EmONC Needs Assessment Report 2010, MoH)	47 per cent

Indicator	1999-2010*
Health centres providing Basic EmONC (EmONC Needs Assessment Report 2010, MoH)	2 per cent
Monthly Drug deliveries monitored by health (facilities (MoH SWAp Progress Report, 2010)	97 per cent
Doctor population ratio (MoH SWAp Progress Report, 2010)	1/41,045 pop
Nurse population ratio (MoH SWAp Progress Report, 2010)	1 /2,643 pop
HSAs population ratio (MoH SWAp Progress Report, 2010)	1/1,368 pop
Private practitioners participating in dots (MoH SWAp Progress Report, 2010)	74 per cent
Pregnant women starting ANC during 1 st trimester (MoH SWAp Progress Report, 2010)	9 per cent
TB defaulters among new smear positive (MoH SWAp Progress Report, 2010)	2 per cent
People tested and counselled for HIV, receiving results in the last 12 months (MoH SWAp Progress Report, 2010)	1,712,170
People alive and on treatment (HAART) at the end of each year (MoH SWAp Progress Report, 2010)	224,999
Supplementation of Vit A coverage in 6 – 59 months (SWAp Review Progress Report 2010)	17 per cent
Under five Children with symptoms of ARI and/or fever in preceding 2 wks for whom treatment was sought from health facility (SWAp Review Progress Report 2010)	51.8 per cent
Under five Children with diarrhea who received oral rehydration therapy in preceding 2 wks (SWAp Review Progress Report 2010)	63.9 per cent
Young people aged 15-24 who both correctly identify ways of preventing the sexual transmission of HIV and reject major conceptions about HIV (SWAp Review Progress Report 2010)	
Men	42 per cent
Women	41 per cent
Men who do not know signs/symptoms of pregnancy complications (SWAp Review Progress Report 2010)	64.8 per cent
Health centers with minimum staff (SWAp Review Progress Report 2010)	13 per cent
Nurses with midwifery skills (SWAp Review Progress Report 2010)	93 per cent
Students graduating from Health training institutions	
Medical doctors	
Nurses (Professional/Registered and Technicians) (SWAp Review Progress Report 2010)	54 309
All categories of health professional (Medical doctors, Nurses and allied health) (SWAp Review Progress Report 2010)	729
Health facilities satisfying all 4 infrastructure requirement (SWAp Review Progress Report 2010)	55 per cent
SLA signed between MoH, CHAM and other facilities (SWAp Review Progress Report 2010)	66 per cent
Crude Birth Rate (CBR) (Population and Housing Census, 2008)	39.66/1,000 pop
Crude Death Rate (CDR) (Population and Housing Census, 2008)	10/1,000 pop

Source: SWAp Review Progress Report 2010, Population and Housing Census, 2008; NSO, Welfare Monitoring Survey 2009

Annex 2: Health Workforce Status

Skill level	Total	Total women	Urban	Rural	Public	Private
Generalist medical practitioners	190	51	117	73	75	115
Specialist medical practitioners	67	13	60	7	29	38
Nursing professionals	2928	2683	118	2,810	1974	954
Nursing and Midwifery Technicians	968	820	249	719	527	441
Nursing associate professionals	-	-	-	-	-	-
Midwifery professionals ^{*1}	-	-	-	-	-	-
Midwifery associate professionals ^{*1}	-	-	-	-	-	-
Paramedical practitioners Clinical Officers and medical assistants)	1881	564	66	1,815	1089	792
Dentists ^{*2}	-	-	-	-	-	-
Dental assistants and therapists	211	43	85	126	120	91
Pharmacists	-	-	-	-	-	-
Pharmaceutical technicians and assistants	293	115	119	174	109	184
Environmental and occupational health & hygiene workers	318	33	73	245	239	79
Physiotherapists and physiotherapy assistants	9	1	7	2	4	5
Optometrists and opticians	8	0	5	3	4	4
Medical imaging and therapeutic equipment operators	102	7	45	57	68	34
Medical and pathology laboratory technicians	473	70	191	282	190	283
Medical and dental prosthetic technicians	-	-	-	-	-	-
Community health workers	10,055	3,865	694	9,361	5,087	4,968
Medical assistants	1,407	584	344	1,063	591	816
Traditional and complementary medicine practitioners	-	-	-	-	-	-
Other health service providers	567	117	112	455	455	112
Health care assistants and other personal care workers in health services	424	88	131	293	373	51
Other science professionals and technicians	221	46	25	196	41	180
Health service managers	2931	607	1185	1,746	1289	1642
Medical records and health information technicians	782	252	276	506	152	630
Other health management and support workers	2931	759	1,395	1,536	157	2,774

Source: MoH, Planning Department, HRH Census, 2008. ^{*1}Midwifery is a second qualification for Nurses and so it doesn't stand alone. ^{*2}During the HR Census Dental Assistants and Therapists were registered as Dentists.

Annex 3: Definitions of Health Workforce Data

Health Workforce: Aggregated Data

In the aggregated data, the health workforce has 11 cadres grouped into the following categories:

Physicians

Includes medical practitioners - generalists and specialists.

Nurses

Includes registered and professional nurses; and nursing technicians.

Midwives

Includes registered and professional midwives; and midwifery technicians.

Nursing Auxiliary

A stand alone non professional group

Health Surveillance Assistants

A stand alone non professional community health workers group

Traditional Birth Attendants

A none professional community health worker group

Dentists

Includes professional dental personnel

Dental assistants and dental technicians

Includes dental therapists

Pharmacists

Includes professional pharmacists

Pharmaceutical assistants and pharmaceutical technicians

Stand alone group under pharmacy

Laboratory workers

Includes laboratory scientists, laboratory assistants, laboratory technicians and radiographers

Environment & public health workers

Includes environmental and public health officers, sanitarians, hygienists, environmental and public health technicians, district health officers, malaria technicians, meat inspectors, public health supervisors and similar professions

Community health workers

Includes traditional medicine practitioners, faith healers, assistant/community health education workers, community health officers, family health workers, lady health visitors, health extension package workers, community midwives, institution-based personal care workers, HSAs and traditional birth attendants

Other health workers

Includes a large number of occupations such as dieticians and nutritionists, medical assistants, occupational therapists, operators of medical and dentistry equipment, optometrists and opticians, physiotherapists, podiatrists, prosthetic/orthotic engineers, psychologists, respiratory therapists, speech pathologists, nursing, midwifery, medical practitioners and trainees and interns.

Health management and support workers

Includes general managers, statisticians, lawyers, accountants, medical secretaries, gardeners, computer technicians, ambulance staff, cleaning staff, building and engineering staff, skilled administrative staff and general support staff

Annex 4: List of UN Volunteer Doctors and Specialists and their Location as at 2010

Host Institution	Profession	Duty Station
Ministry of Health	Dental Surgeon	Mzuzu Central Hospital
Ministry of Health	General Surgeon	KCH, Lilongwe
Ministry of Health	Anaesthesiologist	KCH, Lilongwe
Ministry of Health	Physiotherapist	KCH, Lilongwe
Ministry of Health	Pediatrician	KCH, Lilongwe
Ministry of Health	Medical Specialist	KCH, Lilongwe
Ministry of Health	Dental Surgeon	Thyolo District Hospital
Ministry of Health	Gynaecologist	Zomba Central Hospital
Ministry of Health	General Surgeon	Zomba Central Hospital
Ministry of Health	Anaesthesiologist	Zomba Central Hospital
Ministry of Health	General Surgeon	QECH, Blantyre
Ministry of Health	General Surgeon	KCH, Lilongwe
Ministry of Health	General Surgeon	KCH, Lilongwe
Ministry of Health	General Surgeon	KCH, Lilongwe
Ministry of Health	General Surgeon	QECH, Blantyre
Ministry of Health	Obstetrics & Gynaecology	KCH, Lilongwe
Ministry of Health	Dental Surgeon	Nkhotakota District Hospital
Ministry of Health	Dental Surgeon	KCH, Lilongwe
Ministry of Health	Dental Surgeon	QECH, Blantyre
Ministry of Health	Senior Anaesthetic	QECH, Blantyre
Ministry of Health	Obstetrics & Gynaecology	Zomba Central Hospital
Ministry of Health	Surgeon	Mzuzu Central Hospital
Ministry of Health	General Surgeon	KCH, Lilongwe
Ministry of Health	Pharmacist	QECH, Blantyre
Ministry of Health	Dental Surgeon	QECH, Blantyre
Ministry of Health	General Practitioner	Bwaila Hospital, Lilongwe
Ministry of Health	General Practitioner	KCH, Lilongwe
Ministry of Health	General Practitioner	KCH, Lilongwe
Ministry of Health	General Practitioner	Nkhotakota District Hospital
Ministry of Health	General Practitioner	KCH, Lilongwe
Ministry of Health	General Practitioner	Mangochi District Hospital
Ministry of Health	General Practitioner	Zomba Central Hospital
Ministry of Health	General Practitioner	Dedza District Hospital
Ministry of Health	General Practitioner	Mzuzu Central Hospital
Ministry of Health	General Practitioner	Mzuzu Central Hospital
Ministry of Health	Pediatrician	KCH, Lilongwe
Ministry of Health	General Practitioner	QECH, Blantyre
Ministry of Health	General Practitioner	Rumphi District Hospital
Ministry of Health	General Practitioner	Salima District Hospital
Ministry of Health	General Practitioner	KCH, Lilongwe
Ministry of Health	General Practitioner	Zomba Central Hospital
Ministry of Health	Dental Surgeon	KCH, Lilongwe
Ministry of Health	Dental Surgeon	Zomba Central Hospital
Ministry of Health	General Practitioner	Chiradzulu District Hospital
Ministry of Health	General Practitioner	KCH, Lilongwe

Host Institution	Profession	Duty Station
Ministry of Health	General Practitioner	KCH, Lilongwe
Ministry of Health	HIV Programme Supervisor	Zomba General Hospital
Ministry of Health	HIV Programme Supervisor	Health Central West Zone
Ministry of Health	HIV Programme Supervisor	Health Central East Zone
Ministry of Health	HIV Programme Supervisor	Northern Zone Health Support Office
Ministry of Health	HIV Programme Supervisor	Southern Zone Health Support Office,

Source: UNDP Malawi Office, 2011.

Annex 5: Health Workforce Classification Mapping

Occupation	Code	Definition	Notes		
			Examples of occupations included here	Excluded occupations - classified elsewhere	Additional comments
Generalist medical practitioners	2211	Generalist medical practitioners (physicians) apply the principles and procedures of modern medicine in preventing, diagnosing, caring for and treating illness, disease and injury in humans and the maintenance of general health. They may supervise the implementation of care and treatment plans by other health care providers, and conduct medical education and research activities. They do not limit their practice to certain disease categories or methods of treatment, and may assume responsibility for the provision of continuing and comprehensive medical care.	Medical doctor (general), General practitioner, Family medical practitioner, Primary health care physician, District medical doctor-therapeutic, Resident medical officer specialising in general practice	Specialist physician-2212, Paediatrician-2212, Surgeon-2212, Psychiatrist-2212, Traditional medicine practitioner-2230, Paramedical practitioner-2240	Occupations included in this category require completion of a university-level degree in basic medical education plus internship for competent performance. Medical trainees who are non-university graduates should <u>not</u> be included here. Medical interns who have completed their university education in basic medical education and are undertaking postgraduate clinical training are included here. All under this category should be licensed to practice by Medical Council of Malawi.
Specialist medical practitioners	2212	Specialist medical practitioners (physicians) apply the principles and procedures of modern medicine in preventing, diagnosing, caring for and treating illness, disease and injury in humans using specialised testing, diagnostic, medical, surgical, physical and psychological techniques. They may supervise the implementation of care and treatment plans by other health care providers. They specialise in certain disease categories, types of patient or methods of treatment, and may conduct medical education and research activities in their chosen areas of specialisation.	Specialist physician (internal medicine), Surgeon, Anaesthetist, Cardiologist, Emergency medicine specialist, Ophthalmologist, Obstetrician, Gynaecologist, Paediatrician, Pathologist, Preventive medicine specialist, Psychiatrist, Radiologist, Resident medical officer in specialist training	General medical practitioner-2211, Dental practitioner-2261, Dental surgeon-2261, Physiotherapist-2264, Psychologist-2634	Occupations included in this category require completion of a university-level degree in basic medical education plus postgraduate clinical training in a medical specialisation (except general practice) or equivalent. Medical trainees who are non-university graduates should <u>not</u> be included here. Resident medical officers training as specialist practitioners (except general practice) are included here. Must be licenced by Medical Council of Malawi. All under this category

Occupation	Code	Definition	Notes		
			Examples of occupations included here	Excluded occupations - classified elsewhere	Additional comments
Nursing professionals	2221	Nursing professionals plan, manage, provide and evaluate nursing care services for persons in need of such care due to effects of illness, injury, or other physical or mental impairment, or potential risks for health. They work autonomously or in teams with medical doctors and other health workers. They supervise the implementation of nursing care plans, and conduct nursing education activities.	Professional nurse, Specialist nurse, Nurse practitioner, Clinical nurse, General nurse-midwife, Community Health/Public health nurse, Nurse anesthetist; health service nurse managers	Professional midwife-2222, Nursing and midwifery technicians – 3221	Occupations included in this category normally require completion of University degree and Diploma level education in theoretical and practical nursing and qualify as Registered Nurses. They should be licensed to practice by the Nurses and Midwives Council of Malawi. Any <u>one not licensed</u> should not use the nursing title. Nursing professionals who spend the majority of their working time in maternal and newborn health care services should be included under 'Midwifery professionals'-2222.
Nursing and Midwifery Technician	3221	Nursing and Midwifery Technicians Second level of nursing and midwifery practitioners who provide basic nursing care for people who are in need of such care due to effects of ageing, illness, injury, or other physical or mental impairment. They implement care, treatment and referral plans established by medical, nursing and other health professionals.	nursing technicians midwifery technicians Community Health Nursing and Midwifery Technicians Psychiatric Nursing and Midwifery Technicians Anesthetist Nursing and Midwifery Technician Ophthalmic Nursing and Midwifery Technicians	Professional nurse-2221,	Occupations included in this category require formal training in nursing and midwifery services. Must be awarded an accredited College Diploma and licensed by the Nurses and Midwives Council of Malawi. Any <u>one not licensed</u> should not use the nursing title
Midwifery professionals	2222	Midwifery professionals plan, manage, provide and evaluate midwifery care services before, during and after pregnancy and childbirth. They provide delivery care for reducing health risks to women and newborns, working autonomously or in teams with other health care providers.	Professional midwife	All not trained as midwives	Occupations included in this category require completion of tertiary-level education in theoretical and practical midwifery. All under this category must be licensed to practice by Nurses and Midwives Council of Malawi

Occupation	Code	Definition	Notes		
			Examples of occupations included here	Excluded occupations - classified elsewhere	Additional comments
Midwifery associate professionals (Category not applicable to Malawi)	3222	Midwifery associate professionals provide basic health care and advise before, during and after pregnancy and childbirth. They implement care, treatment and referral plans to reduce health risks to women and newborns as established by medical, midwifery and other health professionals.	Associate professional midwife, Assistant midwife	Professional midwife-2222, Associate professional nurse-3221, Midwifery attendant-5321	Occupations included in this category normally require formal training in midwifery services. Midwifery attendants with little or no formal training should be included under 'Health care assistants'-5321.
Paramedical practitioners	2240	Paramedical practitioners provide basic clinical services - curative and preventive medical services in a variety of settings. They work autonomously or with limited supervision of medical doctors, and apply selected advanced clinical procedures for treating and preventing diseases, injuries, and other physical or mental impairments common to specific communities.	Clinical officer: generalist, ophthalmic, orthopaedic And medical assistants	All not trained to provide clinical services	Occupations included in this category require completion of tertiary-level training in theoretical and practical medical services. All under this category need to be licensed by Medical Council of Malawi.
Dentists	2261	Dentists apply the principles and procedures of modern dentistry in diagnosing, treating and preventing diseases, injuries and abnormalities of the teeth, mouth, jaws and associated tissues. They use a broad range of specialized diagnostic, surgical and other techniques to promote and restore oral health.	Dentist, Dental practitioner, Dental surgeon, Oral and maxillofacial surgeon, Endodontic, Orthodontist, Paedodontist, Periodontist, Prosthodontist, Stomatologist	Dental prosthetic technician-3214, Dental assistant-3251, Dental hygienist-3251	Occupations included in this category require completion of university-level training in theoretical and practical dentistry or related field. All under this category need to be licenced by Medical Council of Malawi.
Dental assistants and therapists	3251	Dental assistants and therapists provide basic dental care services for the prevention and treatment of diseases and disorders of the teeth and mouth, as per care plans and procedures established by a dentist or other oral health professional.	Dental assistant, Dental hygienist, Dental therapist	Dental aide-5329, Dental mechanic-3214, Dental prosthetist-3214, Dental technician-3214, Dentist-2261	Occupations included in this category normally require formal training in dental hygiene, dental-assisting or related field. All under this category need to be licensed by Medical Council of Malawi.

Occupation	Code	Definition	Notes		
			Examples of occupations included here	Excluded occupations - classified elsewhere	Additional comments
Pharmacists	2262	Pharmacists store, preserve, compound, test and dispense medicinal products. They counsel on the proper use and adverse effects of drugs and medicines following prescriptions issued by medical doctors and other health professionals. They contribute to researching, preparing, prescribing and monitoring medicinal therapies for optimizing human health.	Hospital pharmacist, Industrial pharmacist, Retail pharmacist, Dispensing chemist	Pharmacologist-2131, Pharmaceutical technician-3213	Occupations included in this category require completion of university-level training in theoretical and practical pharmacy, pharmaceutical chemistry or a related field. All under this category need to be licensed by Pharmacy and Medicines Board in Malawi.
Pharmaceutical technicians and assistants	3213	Pharmaceutical technicians and assistants perform routine tasks associated with preparing and dispensing medicinal products under the supervision of a pharmacist or other health professional.	Pharmaceutical technician, Pharmacy assistant	Pharmacist-2262, Pharmacy aide-5329, Pharmacology technician-3141	Occupations included in this category normally require basic medical and pharmaceutical knowledge obtained through formal training. Pharmacology technicians and related associate professionals who work with living organisms are <u>not</u> included here (classified under Life science technicians).
Environmental and occupational health & hygiene workers	2263, 3257	Environmental and occupational health & hygiene workers plan, assess and investigate the implementation of programs and regulations to monitor and control environmental factors that can potentially affect human health, to ensure safe and healthy working conditions, and to ensure the safety of processes for the production of goods and services.	Environmental health officer, Occupational health and safety adviser, Occupational health and safety inspector, Occupational hygienist, Sanitarian, Health inspector, Food sanitation and safety inspector	Specialist medical practitioner 2212, Specialist Community Health nurse (public health)-2221,	Occupations included in this category require formal training in environmental public health, occupational health and safety, sanitary sciences, or a related field. All under this category need to be licensed by Medical Council of Malawi.
Physiotherapists and physiotherapy assistants	2264, 3255	Physiotherapists and physiotherapy assistants provide physical therapeutic treatments to patients in circumstances where functional movement is threatened by injury, disease or impairment. They may apply movement, ultrasound, heating, laser and other techniques.	Physiotherapist Rehabilitation Assistants	Occupational therapist-2269, Osteopath-3259, Chiropractor-3259, Podiatrist-2269	Occupations included in this category require formal training in physical rehabilitation therapy or a related field. All under this category need to be licensed by Medical Council of Malawi.

Occupation	Code	Definition	Notes		
			Examples of occupations included here	Excluded occupations - classified elsewhere	Additional comments
Optometrists and opticians	2267, 3254	Optometrists and opticians provide primary eye health and vision care services. Optometrists and ophthalmic opticians provide diagnosis management and treatment services for disorders of the eyes and visual system. Dispensing opticians design, fit and dispenses optical lenses for the correction of reduced visual acuity.	Optometrist, Optician, Orthoptist	Ophthalmologist-2212	Occupations included in this category require formal training in optometry, orthoptics, opticianry or a related field. All under this category need to be licensed by Medical Council of Malawi.
Medical imaging and therapeutic equipment operators	3211	Medical imaging and therapeutic equipment technicians test and operate radiographic, ultrasound and other medical imaging equipment to produce images of body structures for the diagnosis and treatment of injury, disease and other impairments. They may administer radiation treatments to patients under the supervision of a radiologist or other health professional.	Medical imaging technician, Diagnostic medical radiographer, Mammographer	Radiologist-2212	Occupations included in this category require formal training in medical technology, radiology, sonography, nuclear medical technology, or a related field. All under this category need to be licensed by Medical Council of Malawi.
Medical and pathology laboratory technicians	3212	Medical and pathology laboratory technicians perform clinical tests on specimens of bodily fluids and tissues in order to get information about the health of a patient or cause of death.	Medical laboratory technician, Medical laboratory assistant, Cytology technician, Blood bank technician, Pathology technician	Pathologist-2212	Occupations included in this category require formal training in biomedical science, medical technology, or a related field. Technicians conducting laboratory tests on specimens from animals are <u>not</u> included here (classified under Veterinary technicians). All under this category need to be licensed by Medical Council of Malawi.
Medical and dental prosthetic technicians	3214	Medical and dental prosthetic technicians design, fit, service and repair medical and dental devices and appliances following prescriptions or instructions established by a health professional. They may service a wide range of support instruments to correct physical medical or dental problems such as neck braces, orthopedic splints, artificial limbs, hearing aids, arch supports, dentures, and dental crowns and bridges.	Medical appliance technician, Prosthetist, Orthotist, Prosthetic technician, Orthotic technician, Dental technician, Denturist	Dental assistant-3251, Dispensing optician-3254	Occupations included in this category require basic medical, dental and anatomical knowledge obtained through formal training. All under this category need to be licensed by Medical Council of Malawi.

Occupation	Code	Definition	Notes		
			Examples of occupations included here	Excluded occupations - classified elsewhere	Additional comments
Community health workers	3253	Community health workers provide health education, referral and follow up, case management, and basic preventive health care and home visiting services to specific communities. They provide support and assistance to individuals and families in navigating the health and social services system.	Community health worker: Health Surveillance Assistant; home based care; Village health worker - volunteers	Nursing Auxillaries-5322, Home based care aide-5322, traditional healer-3230 Community health nurses and midwives 3221	Occupations included in this category require formal or informal training recognized by the health and social services authorities. Providers of routine personal care services, self-defined health care providers and traditional medicine practitioners are <u>not</u> included here. This category of health workers is not regulated
Medical assistants	3256	Medical assistants perform basic clinical and administrative tasks to support patient care under the direct supervision of a clinical officer and or medical practitioner or other health professional.	Medical assistant,	Clinical officer-2240, Dental assistant-3251, Physiotherapy assistant-3255, Medical prosthetic technician-3214, Medical imaging assistant-5321	Occupations included in this category require formal training in health services provision. All under this category need to be licensed by Medical Council of Malawi.
Traditional and complementary medicine practitioners	2230, 3230	Traditional and complementary medicine practitioners apply procedures and practices based on the theories, beliefs and experiences indigenous to different cultures, used in the maintenance of health and in the prevention or treatment of physical and mental illnesses.	Acupuncturist, Ayurvedic practitioner, Chinese herbal medicine practitioner, Homeopath, Naturopath, Bonesetter, Herbalist, Witch doctor, Village healer, Scraping and cupping therapist	Acupressure therapist-3255, Shiatsu therapist-3255, Hydrotherapist-3255, Chiropractor-3259, Osteopath-3259	Occupations included in this category require knowledge and skills acquired from formal education, or informally through the traditions and practices of the communities where they originated. Faith healers who treat human ailments through spiritual therapies, without using herbal preparations or other physical interventions, are <u>not</u> included here. The practice of all those under this category are not regulated.

Occupation	Code	Definition	Notes		
			Examples of occupations included here	Excluded occupations - classified elsewhere	Additional comments
Other health service providers		This category may include a wide range of occupations connected with health service provision.	Ambulance paramedic-3258, Emergency medical technician-3258, Dieticians and nutritionists-2265, Audiologists and speech therapists-2266, Podiatrist-2269, Occupational therapist-2269, Chiropractor-3259, Osteopath-3259, Psychologist-2634, Social workers and counsellors-2635		Occupations included in this category normally require formal training in a health or social service-related field.
Health care assistants and other personal care workers in health services	5321, 5322, 5329	Personal care workers perform routine patient care services as per care plans, practices and procedures established by a health professional.	Hospital orderly, Nursing aide, Patient care assistant, Dental aide, Midwifery attendant, Psychiatric aide, Medical imaging assistant, Home care aide, Pharmacy aide, Dental aide, Sterilization aide, Faith healer	Nurse (associate professional)-3221, Nurse (professional)-2221, Community health worker-3253	Occupations included in this category generally do not require extensive health care knowledge or training. Personal care workers may work in a variety of settings including private homes as well as health facilities (hospitals, medical and dental practice facilities, rehabilitation centres, and other types of residential facilities with or without on-site nursing care services).

Occupation	Code	Definition	Notes		
			Examples of occupations included here	Excluded occupations - classified elsewhere	Additional comments
Other science professionals and technicians		This category may include a wide range of occupations connected with physical and life sciences research and applications to solve human health problems.	Pharmacologist-2131, Biologist-2131, Biotechnologist-2131, Cell geneticist-2131, Environmental protection professional-2133, Environmental research scientist-2133, Medical physicist-2111, Bacteriology technician-3141, Pharmacology technician-3141		Occupations included here normally require formal training in a physical or life science-related field.
Health service managers	1342	Health service managers plan, coordinate and supervise the provision of clinical, personal care and community health care services.	Health facility administrator, Medical nursing home administrator, Clinical manager, Director of nursing care, Hospital matron, Community care coordinator, Chief public health officer	Aged care service manager-1343, Senior government official-1112	The main tasks and duties for jobs in this occupational category include guiding and directing the activities of organizations, departments and other workers. Education and training requirements may vary depending on the position and national context — likely including some combination of formal education, on-the-job training and work experience.
Medical records and health information technicians	3252	Medical records and health information technicians assess, manage and implement health records processing, storage and retrieval systems in medical facilities and other health care settings to meet the legal, professional, ethical and administrative records-keeping requirements of health services delivery.	Medical records clerk, Medical records technician, Health information system technician, Health information clerk, Medical records analyst, Clinical coder, Disease registry technician	Medical secretary-3344, Data entry clerk-4132, Filing and copying clerk-4415	Occupations included in this category normally require knowledge of medical terminology, legal aspects of health information, health data standards, and computer- or paper-based data management as obtained through formal education and/or on-the-job training. Clerks who perform general secretarial or clerical duties are <u>not</u> included here (classified under Clerical support workers).

Occupation	Code	Definition	Notes		
			Examples of occupations included here	Excluded occupations - classified elsewhere	Additional comments
Other health management and support workers		This category may include a wide range of workers performing a variety of administrative, clerical, and other tasks and duties to support the provision of health services and functioning of health systems.	Health policy analyst-2422, Government licensing official-3354, Aged care service manager-1343, Staff training officer-2424, Medical secretary-3344, Computer technician-3513, Data entry clerk-4132, Filing and copying clerk-4415, Receptionist-4226, Building caretaker-5153, Cook-5120, Ambulance driver-8322		

Annex 6: International Standard Classification Mapping

Field	Definition	Examples of education programmes included here
Medicine	The study of the principles and procedures used in preventing, diagnosing, caring for and treating illness, disease and injury in humans and the maintenance of general health.	Basic medical education: programmes for the training of medical doctors/physicians
		Paramedical programmes: training of paramedical practitioners/advanced practice clinicians (includes tertiary level programmes not leading directly to the award of a medical research qualification)
Nursing and midwifery	The study of providing health care for people who are in need of such care due to effects of illness, injury or impairment, or potential risks for health, and assisting physicians and other health professionals diagnose and treat patients.	Basic nursing education: programmes for the training of nursing professionals (tertiary level)
		Basic midwifery education: programmes for the training of midwifery professionals (tertiary level)
Dental studies	The study of diagnosing, treating and preventing diseases and abnormalities of the teeth and gums. It includes the study of designing, making and repairing dental prostheses and orthodontic appliances. It also includes the study of providing assistance to dentists.	Dentistry: programmes for the training of dentists (tertiary level)
		Dental care services: programmes for the training of dental assistants, dental therapists, dental prosthetic technicians and related occupations (e.g. dental-assisting, dental hygiene, dental nursing, dental laboratory technology)
Medical services (health sciences)	The study of physical disorders, treating diseases and maintaining the physical well-being of humans, using non-surgical procedures.	Pharmacy: programmes for the training of pharmacists (tertiary level)
		Physiotherapy: programmes for the training of physiotherapists (tertiary level)
		Medical technology: programmes for the training of medical imaging and therapeutic equipment technicians (e.g. medical X-ray techniques, radiology, radiotherapy, sonography)
		Medical laboratory technology: programmes for the training of medical and pathology laboratory technicians
		Medical prosthetics: programmes for the training of medical prosthetic technicians
		Other programmes for the training of health professionals and associate professionals (e.g. emergency medical treatment, nutrition & dietetics, optometry, speech pathology)
Environmental, public and occupational health	The study of the relationships between living organisms and the environment that affect public health. Includes the study of recognizing, evaluating and controlling environmental factors associated with the workplace.	Programmes in services to the community dealing with items that affect public health (e.g. hygiene standards in food and water supply)
		Programmes in occupational health and safety (e.g. ergonomics, health and safety in the workplace, industrial hygiene)

Annex 7: Members Consulted in the HRTWG

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Ms Katharina	MSF Malawi Office	MSF Mission Office Blantyre	Blantyre
Ms Amanda Banda	HRH Advocacy Officer	MSF Mission Office Blantyre	Blantyre
Mr.Chris Kamanga	Administrator	CHAM	Lilongwe
Mrs. Angelina Chiotcha	Principal Nursing Officer	KCH	Lilongwe