THE UNITED REPUBLIC OF TANZANIA
MINISTRY OF HEALTH AND SOCIAL WELFARE

HUMAN RESOURCE FOR HEALTH COUNTRY PROFILE 2012/2013

July 2013

Ministry of Health and Social Welfare
Human Resources Directorate
P.O. Box 9083, Dar es Salaam

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LIST OF ACRONYM

CDC	Centre for Disease Control
CHMTs	Council Health Management Teams
FGD	Focus Group Discussion
HCWs	Health Care Workers
HIV/AIDS	Human Immunodeficiency Virus/ Acquired Immunodeficiency Syndrome
HRH	Human Resource for Health
HRHIS	Human Resource for Health Information System
HRP	Human Resource Planning
MoHSW	Ministry of Health and Social Welfare
MMAM	Mpango wa Maendeleo ya Afya ya MSINGI(Swahili acronym for PHSDP)
NACTE	National Council for Technical Education
NTA	National Technical Award
PMO-PS	Prime Minister Office - Public Service
PHSDP	Primary Health Service Development Programme
PO-PSM	President's Office - Public Service Management
PMO-RALG	Prime Minister's Office - Regional Administration and Local Government
RHMTs	Regional Health Management Teams
TIIS	Training Institution Information System
VETA	Vocational Educational Technical Award

FOREWORD

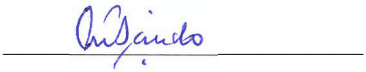
Ministry of Health and Social Welfare and its stakeholders recognize the importance of documenting and consolidating all information and data related to human resource for health in key areas.

The Ministry has therefore formulated Tanzania Human Resource for Health Country Profile booklet to facilitate easy access to the HRH data for the purposes of facilitating proper informed decisions in the areas of planning, development and management.

The need to have the reliable documented data was prompted by number of limitations such as lack of well recorded, comprehensive and reliable HRH information. Furthermore contradicting figure from various sources leading to difficulties in validation and ascertaining accuracy and reliability of information collected from multiple sources hence challenge in analyzing the then available data.

Tanzania HRH Country Profile provides information on the HRH critical areas such as stock and trends of Health workers, distribution, production, utilization and governance. This information enables health planners, trainers and managers to make rational decisions related to HRH that guarantee provision of quality health services to the population.

It is important that each year the HRH Country Profile be updated as it has proved to be useful reference in HRH aspects. It should also made available within Ministry of Health and Social Welfare, Local Government Authorities, Faith based organizations, Private sectors, Health institutions, Civil Societies, Local and International organizations. Easy access will facilitate setting of the benchmark in order to determine progress and improvement of performance hence improved health service delivery.



Dr. Donan Mmbado

Chief Medical Officer.

ACKNOWLEDGEMENTS

The Ministry of Health and Social Welfare wishes to acknowledge with thanks for the time and support of all involved in this assignment.

I would like to thank all individuals within and outside health sector for their willingness to offer assistance in different ways. Their contributions have led into the production of this HRH Country Profile for Tanzania.

Special thanks, is extended to JICA HRHDP Tanzania, for their financial support in undertaking the task of establishing HRH and Training Institutions data bases which were used to collecting and generate information of HRH and training of all health facilities' Data Users in the country. These Institutions includes Service delivery facilities, Training Institutions, Employing authorities in the Regions and Districts, Ministry agencies and FBO and Private.

Gratitude is extended to all others who contributed in one-way or another but not mentioned in this section. Appreciation is shown for the number of valuable reports and documentation given to the author, as they provided immense information that was not only necessary to this assignment but enabled inclusion of quality material to the Tanzanian HRH country profile.

This profile would not have been completed without the support of all the officials; Special acknowledgements go to writers' team within and outside the Ministry. These are; Mrs. E. Mwakalukwa – Assistant Director Human Resource Planning, Technical Officers within the Department of Human Resource Development; Mr. Martin Mapunda, Mr. Hussein Mavunde, and Haruna Hussein, from Department of Quality Assurance, Mr. Renatus Mashauri, from DPP, Mr. Claud Kumalija, Mis. Esther Mwera, Mr. Mkoba and Mr. Enock, From ICT Unit, Mr. Sottter and Mzeru, from Computer Science Department of University of Dar es Salaam Mr. Ismail and Entersoft Company Ltd, Mr. Kitururu Elisa and Mis. Elizabeth Bigirwa as support staff in this assignment, for their tireless effort to compile the required statistics and writing the document hence the production of this report.

The Ministry expresses gratitude to the Health Workers and various Stakeholders who spent their valuable time keen in data into HRHIS and TIIS and providing creative facts, comments and insight basing on their experience. Their contribution made very significant step towards development of this HRH Country Profile.

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EXECUTIVE SUMMARY

Tanzania's health sector, like most countries in Sub-Saharan Africa is facing a big shortage of Health workers at all levels, which indirect affect negatively the delivery of health care services to the Tanzanian people.

Currently the health sector operates with less than half the required health workforce. A critical shortage of medical officers, pharmacists, medical laboratory staff, midwives and nurses also continue to affect the health sector inducing multi-tasking.

The health sector is also, among others, characterized by inadequate health workers training and education systems, inadequate conditions of service, poor health infrastructure and working environments, as well as low health service financing.

The HRH crisis is recognized as a major impediment to achieving Millennium Development Goals (MDGs), particularly those related to maternal and child health.

There are three categories of health service providers in Tanzania, namely the public facilities, the faith based institutions under the coordination of CSSC, and the private sector under coordination of APTHA. The Ministry of Health and Social Welfare (MoHSW) has an HRH Technical Working Group to assist in the management, monitoring and evaluation of the HRH situation. However, despite this mechanism, the MoHSW has put in place a number of strategies ranging from systematic surveys to timed bilateral, multilateral and committee meetings all aimed at monitoring and evaluation of the performance of HRH guided by the National Strategic Plan 2008 - 2013.

This country profile is aimed at providing a solid information base, necessary to create the conditions of areal awareness and to ensure the effective actions of advocacy regarding HRH issues in the country.

The profile will also assist in comparing the country's HRH challenges and policy responses to those of other countries in the region. In addition, this profile gives basic guidelines on how to describe the HRH stock and trends, imbalances in skill mix, distribution and mobility of health workers. Orientations are proposed to guide the analysis of data on HRH production and utilization, performance, working conditions, management of the migration, legislation and regulation. The data collection for this assignment included desk reviews of available materials.

Most recent precise numbers of HRH captured in HRHIS and TIIS, 2012 census, Health statistical Abstract. The March 2013 HRHIS and TIIS showed that there are a total of 64,449 Health workers in the health sector.

This excercise further revealed that, the situation, on the ground still reflects a big shortage of HRH. However, the HRH Strategic Plan 2008 2013 is being implemented rigorously. The required number of HWs in 2006 was 125, 924 and the existed were

35,202 while in 2013 the total staffing needed is 177, 215 based on new proposed staffing level 2013.

The Tanzanian health sector general attrition rate is considered to be 3%. There are big strategies taken by Local Government and the MoHSW in particular for retaining staff to remain at their stations. One of these strategies is building staff houses especially in rural and hard to reach areas. A total number of 700 houses have been planned to be built for staff at district level and currently 110 houses have already been finished. The upgrading and expansion of training institutions is ongoing. Schools of nursing introduced double enrollment from 2011, this resulted in increase in the total student enrolment.

Tanzania has identified and embraced the principle of partnerships as one of the important strategies for establishing a strong and reliable health service delivery system. In this respect, strong partnerships have been established with key stakeholders in the health sector, including other government line ministries and departments, local communities, private sector, faith based institutions, civil society and CPs. These partnerships have resulted into significant financial, technical, material and logistical support to the sector.

The main source of healthcare financing is Government through the Ministry of Finance and EconomicAffairs. Tanzania's health spending is still far less than what is recommended by the Abuja Decreration. The WHO has recommended a per capita health spending of US$54 and the government's own target is as outlined in the third Health Sector Strategic Plan (HSSP III) was a per capita health spending of US$ 15.75 by 2009/10 but this has not been met. Although health spending was stable in nominal terms during the period of financial years 2006/07 to 2011/12, it declined slightly in real terms and that in fact the expenditure in health as percentage of the total Government expenditure was declining. For the financial year 2011/12, foreign funds for health amounted to 41% of the budget whilst 59% came from government funds.

This assignment further revealed that anomalies in the newly approved organizational structure have been observed. The effect of this scenario is delays in terms of staff recruitment and appointments of HRH. Inequitable distribution of HRH has also been observed. Low Government salaries and allowances have continued to affect the health workers morale.

INTRODUCTION

The overall objective of the preparation of this HRH Country Profile is to contribute to the HRH development in the Health Sector for strengthening the national health systems for effective and efficient service delivery.

The purpose of this HRH country profile is to serve as a tool for:

- Providing a comprehensive picture of the health workforce situation and trends in terms of the numbers of health workers available whether employed or not, by category in the whole sector (for both public and private sector).
- Describing the existing HRH policies, the management strategies for monitoring and evaluation.
- Describing the communication systems and channels established between policymakers, managers at various levels and stakeholders on the HRH functionality.
- Presenting the HRH information systems in use and efforts being made in strengthening such systems and to facilitate information sharing across the country.

The profile is structured as follows:

Section one gives an outline of the country context, section two, illustrates the country health system while section three presents health workers situation, section four gives an account of HRH production and sections five and six give an account of the HRH utilization and HRH governance, respectively.

The Health Sector in Tanzania has some of the health indicators which the sector is not doing well the particular ones are those related to maternal and child health. One of the factors explaining this situation is the weak health systems including the low quality of health services offered and the inadequacy of skilled health workers available. This situation is not for Tanzania alone but Sub-Saharan Africa faces the greatest challenges while it has 11 percent of the world's population and 24 percent of the global burden of disease, it has only 3 percent of the world's health workers.

It is widely acknowledged that a minimum density threshold of 2.3 professional health workers (doctors, nurse and midwives) per 1000 is required to at least offer effective health service delivery. For the whole African region, the average threshold is 1.6 well below the recommended minimum. The 36 African countries in HRH crisis have an average of only 0.8 health workers per one thousand populations. To meet this shortfall, most countries in the African Region would have to increase the size of their health workforce by 140 percent, requiring significant investment and resources to build the necessary human and institutional capacity to produce additional health workers.

To address the HRH crisis in Tanzania, immediate and long-term evidence based policy actions need to be taken. Among other things, in 2007, the WHO Regional Office officially launched the Africa Health Workforce Observatory (AHWO) to promote evidence based

policy dialogue for HRH development. Similarly, two Regional consultations were organized in 2006 and 2009 to facilitate policy dialogue and share experiences on HRH issues in the African Region, with focus on health workforce observatories.

Methodology

Data was obtained from several sources as follows:

MOHSW Annual Health Statistics Abstract

Every month, each health facility, both public and private, submits a summary health statistics to the district headquarters. These summaries are compiled for the district and then submitted to the regional headquarters and subsequently to the MOHSW where countrywide statistics are prepared. These are published by MOHSW on an annual basis. The last available figures are for 2011 being finalized. They contain among others, distributions by region and district of health facilities, health workers, leading causes of hospital attendances, admissions and deaths and summaries of reproductive and child health services.

MOHSW Schools Database

Non-degree health related training is a responsibility of MOHSW and is regulated by the National Council for Technical Education (NACTE). A database of information on all health training institutions is maintained by MOHSW and includes among others, data on annual intakes and productions of the various cadres as well as the staffing of each Institution.

Human Resources for Health Information System and Training Institution Information System Databases

These systems are being implemented by MOHSW separate from the government payroll system. It includes all health employees in the Health Sector i.e. covers both public and private health facilities. The aim was to enhance proper planning, management and development of health workers at all levels of health service delivery. The financial and material resources came from Japan International Cooperation Agency (JICA) and consultation from University of Dar es Salaam under computer science department and EnterSoft Co.Ltd. As of March 2013, HRH data had been collected from all Health facilities by 94% of the total coverage. The MoHSW will continue make special supportive supervision to make sure that 100% coverage is reached.

Staffing Levels and health workforce requirements

The President Office Public Service Management (PO-PSM) is responsible for policy on public health employees. In 1999, MOHSW, PO-PSM and the Treasury approved manning levels for all public health facilities. These levels are being updated partly to accommodate requirements for HIV/AIDS, which were not considered in the 1999

standards. The updated 2013 staffing levels have been one of the referred sources of information, particularly on the calculation of the health workforce requirements. The HRH profile will be very useful in showing the magnitude of the problem.

Ministry of Health and Social Welfare Annual Budget Speech

The 2013/2014-budget speech contains important summaries of health information, which among others include trends of enrolments into health training institutions, recruitment of health workers and number of health facilities.

The population and demographic data was obtained from the National Bureau of Statistics website (www.nbs.go.tz). Analysis was done using Microsoft Excel 2007.

1: COUNTRY CONTEXT

1.1 Geography and demography

Tanganyika and Zanzibar achieved independence in the early 1960s and thereafter united to form the nation of Tanzania in 1964. Zanzibar is semi-autonomous and handles health issues separate from the mainland. This profile therefore relates to the Tanzania mainland.

Tanzania borders the Indian Ocean, between Kenya and Mozambique and has a total area of 947,300 sq km (885,800 sq km of land and 61,500 sq km of water), including the islands of Mafia, Pemba, and Zanzibar. It shares land boundaries with Burundi 451 km, Democratic Republic of the Congo 459 km, Kenya 769 km, Malawi 475 km, Mozambique 756 km, Rwanda 217 km, Uganda 396 km, Zambia 338 km. Climate varies from tropical along the coast to temperate in highlands and the land terrain also varies from plains along the coast; central plateau; and highlands in the north and south. Tanzania boasts the highest mountain in Africa (Kilimanjaro) and three of the largest lakes on the continent: Lake Victoria (the world's second-largest freshwater lake) in the north, Lake Tanganyika (the world's second deepest) in the west, and Lake Nyasa (Lake Malawi) in the southwest.

The national Currency is Tanzanian Shilling (TZS) which currently stands at Tsh. 1650 to US $1. Major cities are Dar es Salaam, Arusha, Mbeya, Mwanza, and Dodoma (Capital).

Tanzanian's symbols of national identity are the National Flag, National Anthem, Coat of Arms and giraffe. The black color on the National flag stands for the people of Tanzania. Blue represents water bodies. Yellow stands for the mineral wealth.

The blue represents the land and natural resources. The National Anthem is sung on all official occasions such as public meetings, school assemblies and sports gatherings. Tanzania attained its independence from British colonial rule on 9th December 1961.

The population of Tanzania Mainland is 43, 625, 354 million in 2012 (Table 1.1). It is young with a median age of only 18.7 years (male: 18.5 years and female: 19 years) characterized by a high birth rate: 37.7 births/1,000 population and a high death rate: 8.6 deaths/1,000 population (78th place in world comparison).

Age structure of population of Tanzania is still young. The proportion of people aged below 15 years of age in the total population declined from 46% in 1988 to 44% in 2002 and 45% in 2012, the proportion of those aged 15-64 years increased from 50% in 1988 to 52% in 2002 and 52.1% in 2012. The proportion of older

population aged 65 years and over declined from 4.3% in 1988 to 3.9% in 2002 and 2.9% in 2012. However, the absolute number of older population increased over the period.

Table 1.1 Percent Population Distribution by Age Group and Year

Age Group	1978		1988		2002		2012	
	Total	%	Total	%	Total	%	Total	%
<1 years	8,038,288	45.9	10,547,122	46	14,803,723	44.2	1,457,151	3.3
1- 4 years							5,612,744	12.9
5- 14 years							12,101,212	27.7
15 - 44 years	8,756,306	50.0	11,521,961	50	17,340,189	51.8	18,627,556	42.7
45 - 64 years							4,126,566	9.4
65 + years	717,098	4.1	981,839	4.3	1,317,937	3.9	1,700,125	4
Total	17,512,611	100	23,057,922	100	33,461,849	100	43,625,354	100

Source: CIA World Fact book

Unless otherwise noted, information in this page is accurate as of July 12, 2012. As with many other countries, women live longer than men. The estimated sex ratio (male/female) for 2011 decreases from 1.01 in the age group 0-14 years to 0.98 for those15-64 years old and to 0.75 for those 65 years old and over. The overall sex ratio is 98 (Table 1.2).

Table 1.2 Population Distributions by Sex

Year	Total	Male	Female	Male/Female	Growth Rate (%)
1967	11,958,654				3.2
1978	17,036,499				3.22
1988	22,455,207			0.96	2.76
2002	33,461,849	16,349,015	17,112,834	0.95	2.85
2012	43,625,354	21,239,313	22,386,041	0.95	2.7

*Note: estimates explicitly took into account the effects of excess mortality due to AIDS; this can result in lower life expectancy, higher infant mortality, higher death rates, lower population growth rates, and changes in the distribution of population by age and sex than would otherwise be expected. Sources: Sensa ya Watu na Makazi 2012, National Bureau of Statistics Tanzania Census 2012, National Bureau of Statistics.

The United Republic of Tanzania Population and Housing Censuses, 1967, 1978, 1988, 2002 and 2012 shows that, the urban population is increasing faster than the population growth: it increased from 5.7% in 1967 to 13.3%, 18.0%, 22.6% and 26% of the total population in 1978, 1988, 2002 and 2012 respectively. The annual rate of urbanization is estimated at 4.7% compared with a population growth rate of 2.02%. Annex shows the projected regional distribution of the population in 2012.

1.2 Economic context

Tanzania is one among the countries with poor economy in the world in terms of per capital income. The economy depends heavily on agriculture, which accounts for more than 40% of GDP, provides 85% of exports, and employs about 80% of the work force. The government has increased spending on agriculture to 7% of its

budget. Continued donor assistance and solid macroeconomic policies supported a positive growth rate, despite the world recession. The GDP growth averaged 7% per year between 2000 and 2008 and in 2009-10 it was a respectable 6% per year due to high gold prices and increased production. It was estimated to be 6.5% for 2011. Proportional of budget spent on health for the year 2012 was 10.4% which is still below of Abuja Agreement of 15% to be allocated to health sector.

Table 1.3 Economic indicators

Indicators	Year1	Year2	Year3	Year4	Year5
GDP	2005	2009	2010	2011	2012
National Debt as % of GDP		32.3	34.4%	44.4%	47.7%
Economic Aid as % of GDP					
Proportion of Budget spent on health as % of GDP		5.1	6.5%	10.4%	10.4%
Income per capita (in PPP)			$1,400	$1600	$1700
Proportion of population living below poverty line*	38.6 (1991/2)	33.6 (2007)	36% (2011)		40%
Proportion of population with malnutrition (children < 5years)	17.6%		14.6%	14.6%	14.6%
Unemployment rate (Age 15-24years,)	8.8%				
Inflation rate		12.1%	7.2%		9.8%(March, 2013)

Source: * Household & Budget Survey

The estimated GDP composition by sector for 2010 was agriculture: 28.4%, industry: 24% and services: 47.6%. Total of 1,362,559 persons were employed in the formal sector in 2011 as compared to 1,276, 982 persons in 2010. This was the increase of 6.7 percent. The proportion of total employment was higher in the private sector 63.1% in 2011 63.7% in 2010 than in public sector 36.9% in 2011 and 36.3% in 2010 (EES, 2010-2011)

Only about a half of the population constitutes the active labor force (estimated as 23.39 million for 2010) with the majority in agriculture. In a country with the majority of people being rural and depending on agriculture, it is difficult to estimate unemployment. However, it was estimated that in 2005, unemployment among youths aged 15-24 was 8.8%.

In the 2002 census, 69.4% of the population aged 15 and over could read and write Kiswahili (Swahili), English, or Arabic. This probably reflects the limited education expenditures: 6.8% of GDP for the year 2008 which is only slightly higher than that on health: 5.1% of GDP for the year 2009. In 2010/2011 the per capita health budget reached US$18.8 (up from $10.7 in 2006.2007 and compared with US$54 recommended by WHO). Other services are equally limited. For example, only 54% of the population has improved drinking water sources and only 24% have access to improved sanitation facilities.

1.3 Political Context

Tanzania practices democratic principles of governance. Members of the community chose representatives to represent their values and interests. Thus, Tanzania practises the representative democracy.

The people of Tanzania elect representatives at the national level called members of parliament (MP). The role of these representatives is to speak on behalf of the people from the community that elected that MP. At local level people elect Councilors. Each Council area is divided into wards, which are smaller than Constituencies.

The election of Councilors takes place in the wards. Thus a Councilor represents a ward. At the inaugural meeting of Councilors, a Mayor or Chairperson is elected from amongst the Counselors. In order to uphold the principles of democracy, Tanzania hold general elections every five years were Ward Councilors, Members of Parliament and the President are elected. At the moment, there is a ruling party and Opposition parts. In total there are 12 registered parties.

Tanzania uses the presidential system of governing. In this system, the President and Members of Parliament (National Assembly) are elected by the people during the parliamentary and presidential elections.

The President is the Head of State and he appoints the Vice President and members of the Cabinet who should be members of parliament either by election or by nomination by the president. Tanzania has a total number of 323 members of parliament. The Speaker is the Chairperson of the National Assembly. Members of the National Assembly elect him. The Vice Minister is Leader of the House in the National Assembly.

The following are the major functions and powers of the National Assembly

a) Make Laws
b) Control of the Executive
c) Passing of the National Budget
d) Impeachment of the President and,
e) Ratification of various appointments and proposals

The National Assembly has several Committees. Some of these committees are on Agriculture, Mines, Public Accounts, Health and Community Development and Government Assurances. These committees are not permanent, they are dissolved and new ones formed. The Public Accounts Committee provides checks and balances of Government expenditure in all Government and Quasi Government institutions.

The Committees on Health, Community Development monitor and evaluate the implementation of programs in Government and Quasi Government institutions responsible for health and community development. The Committee on Government Assurances monitors the implementation of policies and programs in all Government and Quasi Government institutions. Policy issues that are monitored also include those outlined in the Presidential speech during the opening of each session of Parliament.

Although the role of central Government is to administer the whole country, the affair of the districts are managed by councils which are part of the Local Government. It is said, therefore, that local councils are local governments that falls under the Ministry of Local Government and Regional Administration.

Councils have legislative powers at the local level. To ensure smooth running, they can make by-laws.

These by-laws must be in line with the Acts of Parliament. If anyone breaks the by-law the councils have the power to sue him or her.

The Local Government through Councils provides many services to the people in the local communities including the following:

a. Maintenance of roads,
b. Provision of housing,
c. Collection and disposal of refuse,
d. Control of epidemics such as cholera, typhoid and elimination of mosquitoes and rats,
e. Provision of recreational facilities such as parks, swimming pools and so on,
f. Provision of street lighting,
g. Issuing of trading and other licenses,
h. Provision of public health services,
i. Maintenance of waterworks,
j. Allocation of sites for residential and industrial development, etc.

The Local Authorities work closely with the Ministries or Central Government Institutions responsible for public and health, roads energy, water and sanitation etc.

Administrative divisions

Tanzania Mainland comprise of 25 regions: Arusha, Dar es Salaam, Dodoma, Geita, Iringa, Njombe, Kagera, Kigoma, Kilimanjaro, Katavi, Lindi, Manyara, Mara, Mbeya, Morogoro, Mtwara, Mwanza, Pwani, Rukwa, Ruvuma, Shinyanga, Singida, Simiyu, Tabora, and Tanga.

Judicial branch

The legal system is based on the English common law and judicial review of legislative acts limited to matters of interpretation. This branch of government consists of a Permanent Commission of Enquiry as the official ombudsman; a Court of Appeal (consists of a chief justice and four judges); High Court (consists of a Jaji Kiongozi and 29 judges appointed by the president; holds regular sessions in all regions); District Courts; Primary Courts (limited jurisdiction and appeals can be made to the higher courts). There are 12 registered political parties and several political pressure groups including the Economic and Social Research Foundation (ESRF), Free Zanzibar, Tanzania Media Women's Association (TAMWA.)

Vision 2025

Tanzania Development Vision 2025 is a wider government official roadmap. The main objective is to is achieve high quality livelihood for all Tanzanians including:

- Access to quality primary health care for all
- Access to quality reproductive health service for all individuals of appropriate ages
- Reduction in infant and maternal mortality rates by three quarters of current levels

Local Government Reform

Local government reform denotes devolution of powers and establishment of a holistic local government system. Within this context primary health services are also managed and administered by Local Government authorities. The Primary Health Services Development Programme (PHSDP) which aims at strengthening Primary Health Care Services is being implemented within the Local Government Reform.

1.4 Health Status

The overall health status of the population is unsatisfactory due to high prevalence of infections (malaria, tuberculosis, HIV/AIDS, childhood infections), unsatisfactory health care services (including maternal care), poor sanitation, unsafe water supply, limited health education and poverty. Table 1.4 and 1.5 show main causes of morbidity and mortality.

Table 1.4 Main causes of morbidity among persons 5 years and older, mainland Tanzania, 2009-2012 (percent distribution), HMIS

	2009	2010	2011	2012
Malaria	33.0	37.9	33.2	33.5
ARI / pneumonia	9.8	11.3	11.8	19.0
Diarrhoeal diseases	4.8	6.5	6.7	5.0
Anemia	4.0	3.2	3.3	3.3
Cardiovascular diseases	3.7	2.4	2.9	3.1
Fractures / dislocations	2.4	0.0	1.7	2.8
Chronic respiratory diseases	0.0	0.0	2.7	2.6
Urinary tract infections	2.5	3.2	2.4	2.6
HIV/AIDS	1.5	3.0	2.1	1.9
Sexually transmitted infections	1.7	1.7	2.5	1.8
Peptic ulcer	1.0	1.4	1.4	1.3
Tuberculosis	2.4	1.4	1.6	1.2
Ill-defined	1.9	1.7	2.4	2.1
Other	31.3	26.3	25.3	19.8
Total percent	100.0	100.0	100.0	100.0
Number of admissions	768,061	812,539	827,389	887,791

Malaria is also the leading diagnosis among admissions and was associated with one-third of all admissions in 2012, similar to the previous years. ARI/pneumonia was unexpectedly common in 2012 (19%), but it is not clear if this is genuine increase in its relative importance or a data quality issue. The latter explanation is more likely. There was also a major drop in the proportion of admissions with diagnoses in the other category, which complicates the interpretation of these figures. Diarrheal diseases and anemia appear in the top 5 in this age group.

Cardiovascular diseases and chronic respiratory infections were 5th and 7th in 2012, while fractures were 6th. HIV/AIDS is increasing, but the trend needs to be interpreted with caution, as HIV/AIDS is often under diagnosed because of stigma and with the increasing availability of ART stigma and recording practices may have changed over time.

Table 1.5 Main causes of death in hospitals among people 5 years and over, mainland Tanzania,2009-2012 (percent distribution), HMIS

	2009	2010	2011	2012
Malaria	19.1	31.6	23.1	22.2
HIV/AIDS	6.1	11.2	11.1	16.8
Cardiovascular disease	6.3	6.6	9.1	11.1
Acute respiratory disease / pneumonia	6.0	8.9	12.2	8.5
Anemia	4.4	6.9	6.0	8.4
Tuberculosis	4.3	5.1	4.4	4.6
Chronic respiratory disease	0.9	-	3.0	3.7
Cancers	2.1	-	2.4	3.0
Diarrhoeal diseases	2.0	3.2	2.4	2.0
Diabetes	0.7	1.6	1.6	2.0
Ill-defined	11.8	1.1	1.2	3.0
Other	36.4	23.8	23.5	14.7
Total percent	100.0	100.0	100.0	100.0
Number	29,849	22,080	22,516	20,620

Case fatality rate in 2012 was 2.3% of admissions, compared to 2.7% in 2010 and 2011. Overall, only 6% of an estimated total number of 300,000 deaths took place in health facilities during 2011-12.

Malaria was the leading cause of death in this age group (22% of all deaths). There is no apparent decline, if 2010 is considered an outlier. HIV/AIDS was the second most cause of death with 17%, higher than in the previous years. Tuberculosis adds another 5% of deaths. Four non-communicable chronic conditions are in the top 10: cardiovascular diseases (11%), chronic respiratory diseases (4%), cancers (3%) and diabetes (2%), although together they cause just one in five hospital deaths. The time trend is difficult to ascertain, as there are likely to be differences in coding practices over time, as well as reporting errors.

Table 1.6 Health Indicators

Indicators	Both sex	Male		Source and Year
Life expectancy at birth	55	53	56	National Bureau of Statistics 2010 estimates
Crude Mortality rate	38.1/1000			National Bureau of Statistics 2010 estimates
Under-5 mortality rate	81			2009/2010, 12th Joint Annual Health Sector Review
Maternal mortality rate (deaths per 100,000 live births)			454	DHS2010
HIV/AIDS prevalence rate (15-49 years)	5.1%	3.8%	6.4%	2012/2013 Tanzania HIV/AIDS and Malaria Indicator Survey
% with access to safe water	88.6% urban 46.8% rural			THMIS 2010
% with access to improved sanitation	26% urban 7% rural			THMIS 2011-20112
Infant mortality rate	51/1000			DHS 2010

2: COUNTRY HEALTH SERVICES

2.1 Governance

Health services at the levels of dispensaries, health centers and district hospitals (described below) constitute primary health care services and are all managed by district councils. The services can be provided by public or private facilities. The primary care services and regional services operate under the Prime Minister's Office, Regional Administration and Local Government as part of the government decentralization of services. The Ministry of Health and Social Welfare under the Central government provides overall policy (National Health Policy) and strategy (5-Year Health Strategic Plans), all guided by the National Vision 2025 and the National Strategy for Growth and Reduction of Poverty.

Private practice is regulated by a Private Practitioners Act and traditional medicine by a Traditional Medicine Practice Act. All the other practitioners (medical, nursing, laboratory, radiology, etc are regulated by related semi-autonomous councils.

The Government, parastatal, voluntary and religious organizations, private practitioners and traditional healers all provide health services in Tanzania, guided by a National Health Policy which aims at provision of quality, equitable and affordable services to all Tanzanians. The policy encourages community participation through construction of dispensaries and cost-sharing or health insurance to meet service costs. Maternal and child health services including those related to vaccinations and some few diseases (diabetes, HIV/AIDS, sickle cell, psychiatry and the elderly) are exempted.

The government of Tanzania embraces a policy of decentralisation by devolution. In the health sector this translates to the following:

Local Government Authorities (LGAs) are responsible for implementation of health services, and regions are responsible for supervision. The central level provides leadership and stewardship in the health sector. District councils take full responsibility for executive tasks in health and social welfare, applying LGA and PMO-RALG administrative procedures, with technical support from the MOHSW. Regional Health Management Teams concentrate on technical support to all public and private health service providers to improve quality of the Council health services, without taking over operational responsibilities. The MOHSW headquarter creates an enabling environment for the health services, leaving executive functions to the appropriate stakeholders (in MDAs, LGAs and private sector). The Ministry will decentralise more executive functions to agencies and institutions under its mandate.

Public Private Partnership creates a level playing field for all health service providers, based on added value of stakeholders and (where appropriate) competition on quality. Making better use of the distinct competencies of private (non-state) partners will contribute to improvement of health of the population.

Service agreements between Councils and private (non-state) providers in health and social welfare will ensure availability of quality services to the population. Private providers with a service agreement will be given access to public resources, to funding through health programmes and access to purchase medicines from MSD when value for money can be achieved. Private investments in health services are being encouraged.

Collaboration between public and private providers will be stimulated to make optimal use of human resources.

The MOHSW will stimulate coordination mechanisms that attract new public and private partners willing to contribute to the improvement of the nation's health status. It will lead Public Private Partnership forum for joint planning and action.

2.2 Service Provision

The health system and especially the Governments referral system assumes a pyramidal pattern starting from village health services and dispensaries to consultant/specialist hospitals. The structure of health services at various levels in the country is as follows:

Village Health Service

This is the lowest level of health care delivery in the country. It includes preventive services which can be provided at homes and usually consists of two village health workers chosen by the village government amongst the villagers and be given a short training before they start providing services.

Dispensary Services

This is the second stage of health services. A dispensary caters for population between 6,000 and 10,000 people and supervises all the village health posts in its area. The current plan is to have a dispensary for each village in the country as per Primary Health Service Development Programme where services are headed by a clinical officer and they are all outpatient except for deliveries.

Health Centre Services

A health centre is expected to cater for 50,000 people which is approximately the population of one administrative division known as a ward. The intention is to have one health centre for each Ward. The services are headed by an Assistant

Medical Officer and include a sixteen-bed inpatient services and minor surgeries.

District Hospitals

There is one public hospital for each district. For districts without a public hospital, a voluntary hospital is designated the district hospital and gets subsidy from the government so as to function as district hospital. The plan is to have at least two graduate doctors per district: a public health specialist to serve as the district medical officer and one doctor to head the hospital.

Regional Referral Hospitals

One for each region, they are supposed to have at least six specialist for internal medicine, paediatrics and child health, obstetrics and gynaecology, surgery, psychiatry and public health.

Zonal Hospitals

The country is divided into 8 zones (Northern, Eastern, Central, southern, Southern Highlands, South West Highland, Lake, and Western, each with a corresponding zonal hospital.

National, Consultant and Specialist Hospitals

These include Muhimbili National Hospital, Muhimbili Orthopaedic Institute, Ocean Road Cancer Institute, Mirembe Hospital (Psychiatry), Bugando, KCMC, CCBRT and Kibongoto Hospital (Tuberculosis).

Referral Abroad

For services not available in Tanzania, patients are referred abroad on government subsidy. The government is actively developing capacity for such services to be provided locally. Those services include open heart surgery, renal dialysis, and oncology etc.

2.3 Health Care Financing

After independence in 1960, the government provided free medical services to all citizens and private-for-profit medical practice was banned in 1977. However, the financial situation in the 1980s necessitated the introduction of regulated private practice in 1991, user fees in public facilities in the form of cost-sharing in 1993, intramural private practice within public facilities in 1999, a national health insurance for civil servants in 1999 and community health funds in 2001. As mentioned in section 2.1 the health vulnerable groups are exempted from cost-sharing to enhance equity.

To allow private participation in health delivery and improve health care, private

providers are encouraged to provide public services under a Public/Private Service Agreement with the appropriate public authority and reimbursement from public funds. Intramural private practice was introduced to encourage public practitioner to remain at their facility, at the same time generating income to subsidize the public services as well as increase the remuneration of the providers. In the National Health Insurance, public servants contribute 3% of their salary which is matched by the same amount by the government. Services include both out and inpatients and all types of providers (except traditional) are eligible for service provision under the scheme. A Community Health Funds (CHF) is being encouraged whereby members contribute an agreed amount once a year and then receive agreed services from their community facility at no additional costs. Partly, to encourage participation, the community contribution is matched by a similar amount from the government from the health basket funds.

Apart from the public funds referred to above and several private-for-profit insurance schemes, there are also other health insurance initiatives including TIKKA (the urban equivalent to CHF), UMASITA (Tanzania Informal Sector Community Health Fund) VIBINDO (Association of small industries and small business owners), and the Social Health Insurance Benefit offered by the National Social Security Fund for its members.

According to the Health Sector Public Expenditure Review Update 2010, the nominal (in real terms) per capita public health expenditure increased from US$9.49 (7.0) in 2005/06 to US$14.71 (9.62) in 2009/10, with an estimate of US$18.80 (10.6) for 2010/11. For 2010/11 this equates to only 9.8% of the national budget, compared to the 15% recommended by the Abuja Declaration and the 54$ per capital recommended by WHO for developing countries.

Health service funds (from cost-sharing) contributed only 3% of health expenditure by the LGAs in 2009/10. In the same year, the National Health Insurance Fund premium contribution was more than the contribution by development partners to the health basket fund. However, its expenditure was only about 50%. Contribution to the Community Health Fund remains low. The government contribution to health expenditure was only 64%, the rest being external assistance. This proportion was down to 54% in the 2010/11 budget, raising concerns on sustainability of health interventions in the event of reduced funding from development partners.

2.4 Health Information System

The Ministry's current policy on the health information system advocates for one main system which links with sub systems in form of module within the main system. For many years now, the Ministry has implemented a Health Management Information System (HMIS) or (MTUHA in Swahili) for reporting health related data from health facilities. Data was manually summarized by each facility and

sent to the district level for compilation to form district statistics. These were then sent manually or electronically to the regional level and subsequently to the national level. This system is now being replaced by DHIS2, a system which includes open source software with the possibility of using mobile phones to send data from the facility direct to a central database. The update also includes Human Resources for Health Information System (HRHIS) and a Training Institutions Information System (TIIS) both of which allow authorized users to update individual information.

In order to collect data on HRH, disease burden and general health service deliver, number of information systems are used, both manual and computerised. For the purposes of executing the computerised information systems, computers have been procured and installed in all districts and health facilities and not health posts. The district offices all have internet facilities. The Health Secretaries operate the computers. Standardized forms and procedures are used to collect data then data are entered into the HRHIS and TIIS. Various attempts have been made to strengthen the sustainability of these systems. One being on site supportive supervision for maintaining the system, updating, data coverage and solving any arising problems, also to check if data is regularly collected and analysed. Data collection and reporting tools are in place at all health facilities and district offices, and the flow of information has been clearly set out using the "one channel" principle. Routine data is regularly analysed, on a quarterly basis

3: HEALTH WORKERS SITUATION

This section presents the health workforce in the country and trends of its evolution during the recent past. These data concern the health workers in all sectors (public, semi-public, private for profit and private not for profit including faith based organizations).

3.1 Health Workers Stock and Trends

The total number of health workers has increased from 47,000 in 2006/7 to 64,449 in 2012/13. The highest increase is among the health trained cadres including doctors and nurses (Table 3.1). However, for all the clinical cadres, the health worker per population ratio is still far below those recommended by WHO.

Table 3.1 Health Worker/Population ratios at National Level (Per 10,000)

Sn.	Profession	Total	HRH PER 10,000 POPULATION
1	Assistant Biomedical Engineering Technician	8	0.002
2	Assistant Dental Officer	172	0.039
3	Assistant Dental Technologist	10	0.002
4	Assistant Environmental Health Officer	1,118	0.256
5	Assistant Laboratory Technologist	1,117	0.256
6	Assistant Medical Officer	1,741	0.399
7	Assistant Nursing Officer	4,248	0.974
8	Assistant Optometric Technologist	5	0.001
9	Assistant Pharmaceutical Technologist	81	0.019
10	Assistant Radiologic Technologist	48	0.011
11	Assistant Technologist	128	0.029
12	Biomedical Engineer	5	0.001
13	Biomedical Engineering Technician	15	0.003
14	Chemist & Chemists Assistants	9	0.002
15	Clinical Assistant	1,096	0.251
16	Clinical Officer	5,950	1.364
17	Dental Assistant	7	0.002
18	Dental Laboratory Technologist	17	0.004
19	Dental Surgeon	99	0.023

...continued

Sn.	Profession	Total	HRH PER 10,000 POPULATION
20	Dental Technologist	17	0.004
21	Dental Therapist	187	0.043
22	Environmental Health Assistants/Officers	929	0.213
23	Health Laboratory Assistant	156	0.036
24	Health Laboratory Scientist	86	0.020
25	Health Recorder	116	0.027
26	Health Secretary	317	0.073
27	Health Technologist	89	0.020
28	Laboratory Technologist	745	0.171
29	Medical Attendants	19,666	4.508
30	Medical Doctor	1,135	0.260
31	Medical Record Officer	98	0.022
32	Medical Record Technician	256	0.059
33	Medical Specialists/Consultants	346	0.079
34	Nurse & Nurse Midwives	14,096	3.231
35	Nursing Officer	2,456	0.563
36	Nutrition Assistant	5	0.001
37	Nutrition Officer	60	0.014
38	Occupational Therapist	22	0.005
39	Optometric Technologist	72	0.017
40	Optometrist	5	0.001
41	Orthopaedic Technologist/Assistant Orthopedic Technologists	16	0.004
42	Other Professionals	3,874	0.888
43	Pharmaceutical Technologist	236	0.054
44	Pharmacist	339	0.078
45	Physiotherapist	118	0.027
46	Physiotherapist Assistant	12	0.003
47	Radiologic Technologist /Radiotherapist	175	0.040
48	Support Staff	2,946	0.675

Source: HRHIS & Tz Population Census 2012

3.2 Distribution of Health Workers by Category/cadre

The rest of this section shows the distribution of workers by category, and by gender (table 3.2), age groups (table 3.3), region (table 3.4), urban/rural (table 3.5), public-private for profit - faith based organization (table 3.6).

As expected, majority of the health workers in nursing are female. For all the other cadres however, males predominate, indicating a persisting degree of gender inequality.

Table 3.2 Gender distributions by health occupation/cadre

Profession	Female	Male	Total	% Female	% Male	Total
Assistant Biomedical Engineering Technician	3	5	8	37.50%	62.50%	100.00%
Assistant Dental Officer	48	121	169	28.40%	71.60%	100.00%
Assistant Dental Surgeon Officer	0	3	3	0.00%	100.00%	100.00%
Assistant Dental Technologist	3	7	10	30.00%	70.00%	100.00%
Assistant Environmental Health Officer	347	771	1,118	31.04%	68.96%	100.00%
Assistant Laboratory Technologist	570	547	1,117	51.03%	48.97%	100.00%
Assistant Medical Officer	526	1,215	1,741	30.21%	69.79%	100.00%
Assistant Nursing Officer	3,501	747	4,248	82.42%	17.58%	100.00%
Assistant Optometric Technologist	4	1	5	80.00%	20.00%	100.00%
Assistant Orthopedic Technologist	0	1	1	0.00%	100.00%	100.00%
Assistant Pharmaceutical Technologist	35	46	81	43.21%	56.79%	100.00%
Assistant Radiologic Technologist	9	37	46	19.57%	80.43%	100.00%
Assistant Radiotherapy Technologist	0	2	2	0.00%	100.00%	100.00%
Assistant Technologist	60	68	128	46.88%	53.13%	100.00%
Biomedical Engineer	1	4	5	20.00%	80.00%	100.00%
Biomedical Engineering Technician	2	13	15	13.33%	86.67%	100.00%
Chemist	0	3	3	0.00%	100.00%	100.00%

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Profession	Female	Male	Total	% Female	% Male	Total
Chemist Assistant	0	6	6	0.00%	100.00%	100.00%
Clinical Assistant	344	752	1,096	31.39%	68.61%	100.00%
Clinical Officer	2,110	3,840	5,950	35.46%	64.54%	100.00%
Dental Assistant	5	2	7	71.43%	28.57%	100.00%
Dental Laboratory Technologist	5	12	17	29.41%	70.59%	100.00%
Dental Surgeon	19	80	99	19.19%	80.81%	100.00%
Dental Technologist	5	12	17	29.41%	70.59%	100.00%
Dental Therapist	64	123	187	34.22%	65.78%	100.00%
Environmental Health Assistants/Officers	363	566	929	39.07%	60.93%	100.00%
Health Laboratory Assistant	81	75	156	51.92%	48.08%	100.00%
Health Laboratory Scientist	26	56	82	31.71%	68.29%	100.00%
Health Recorder	75	41	116	64.66%	35.34%	100.00%
Health Records Technician	2	0	2	100.00%	0.00%	100.00%
Health Secretary	133	184	317	41.96%	58.04%	100.00%
Health Technologist	14	75	89	15.73%	8427%	100.00%
Laboratory Technologist	273	445	718	38.02%	61.92%	100.00%
Medical Attendants	15,837	3,829	19,666	80.52%	19.48%	100.00%
Medical Doctor	300	835	1,135	26.43%	73.57%	100.00%
Medical Laboratory Technologist	14	13	27	51.85%	48.15%	100.00%
Medical Record Officer	59	39	98	60.20%	39.80%	100.00%
Medical Record Technician	175	79	254	68.90%	31.10%	100.00%
Medical Specialists/ Consultants	85	261	346	24.56%	75.44%	100.00%
Nurse & Nurse Midwives	12,527	1,569	14,096	88.87%	11.13%	100.00%
Nursing Officer	2,034	422	2,456	82.82%	17.18%	100.00%
Nutrition Assistant	5	0	5	100.00%	0.00%	100.00%
Nutrition Officer	46	14	60	76.67%	23.33%	100.00%
Occupational Therapist	14	6	20	70.00%	30.00%	100.00%
Occupational Therapist Assistant	1	1	2	50.00%	50.00%	100.00%
Optometric Technologist	20	52	72	27.78%	72.22%	100.00%
Optometrist	0	5	5	0.00%	100.00%	100.00%
Orthopaedic Technologist	4	11	15	26.67%	73.34%	100.00%

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Profession	Female	Male	Total	% Female	% Male	Total
Other Professionals	2,010	1,862	3,874	51.88%	48.06%	100.00%
Pharmaceutical Technologist	89	147	236	37.71%	62.29%	100.00%
Pharmacist	106	233	339	31.27%	68.73%	100.00%
Physiotherapist	40	78	118	33.90%	66.10%	100.00%
Physiotherapist Assistant	1	11	12	8.33%	91.67%	100.00%
Principal Health Laboratory Scientist	1	3	4	25.00%	75.00%	100.00%
Radiographer	1	8	9	11.11%	88.89%	100.00%
Radiographic Assistant Technician	8	15	23	34.78%	65.22%	100.00%
Radiography Technician	1	1	2	50.00%	50.00%	100.00%
Radiologic Technologist	18	107	125	14.40%	85.60%	100.00%
Radiotherapist	1	2	3	33.33%	66.67%	100.00%
Radiotherapy Technologist	5	8	13	38.46%	61.54%	100.00%
Support Staff	831	2,117	2,946	28.21%	71.86%	100.00%
Grand Total	42,861	21,588	64,449	66.50%	33.50%	100.00%

Table 3.3: HRH by Age groups

Profession	< 30 Yrs	30 – 39	40 – 49	50- 59	60+	Total
Assistant Biomedical Engineer Technician	0	3	1	2	2	8
Assistant Dental Officer	9	55	62	40	6	172
Assistant Dental Technologist	0	4	5	0	1	10
Assistant Environmental Health Officer	72	223	509	297	17	1,118
Assistant Laboratory Technologist	237	514	243	97	26	1,117
Assistant Medical Officer	6	229	662	712	132	1,741
Assistant Nursing Officer	575	1,511	1,091	880	191	4,248
Assistant Optometric Technologist	2	1	1	1	0	5
Assistant Orthopedic Technologist	0	0	1	0	0	1
Assistant Pharmaceutical Technologist	9	22	29	20	1	81
Assistant Radiologic Technologist	2	12	18	10	4	46
Assistant Radiotherapy Technologist	0	0	0	1	1	2

...continued

Profession	< 30 Yrs	30 – 39	40 – 49	50- 59	60+	Total
Assistant Technologist	36	42	28	17	5	128
Biomedical Engineer	0	2	2	0	1	5
Biomedical Engineering Technician	0	2	10	3	0	15
Chemist	0	1	2	0	0	3
Chemist Assistant	5	1	0	0	0	6
Clinical Assistant	400	169	172	281	74	1,096
Clinical Officer	553	1,721	1,926	1,508	242	5,950
Dental Assistant	0	2	4	1	0	7
Dental Laboratory Technologist	6	9	6	12	1	34
Dental Surgeon	3	70	8	12	6	99
Dental Therapist	41	102	27	13	4	187
Environmental Health Assistants/ Officers	38	165	400	292	34	929
Health Laboratory Assistant	37	53	33	24	9	156
Health Laboratory Scientist	6	23	21	25	11	86
Health Recorder	17	59	21	18	1	116
Health Records Technician	1	1	0	0	0	2
Health Secretary	78	135	64	34	6	317
Health Technologist	7	29	10	27	16	89
Medical Laboratory Technologist	93	321	200	110	21	745
Medical Attendants	1,975	4,223	6,830	5,816	822	19,666
Medical Doctor	66	636	174	146	113	1,135
Medical Record Officer	17	37	25	17	2	98
Medical Record Technician	32	100	50	63	9	254
Medical Specialists/Consultants	3	46	83	100	114	346
Nurse & Nurse Midwives	2,099	4,106	3,880	3,279	732	14,096
Nursing Officer	111	866	654	622	203	2,456
Nutrition Assistant	1	0	2	2	0	5
Nutrition Officer	13	29	11	6	1	60
Occupational Therapist	2	8	8	2	0	20
Occupational Therapist Assistant	0	0	1	1	0	2
Optometric Technologist	14	26	14	17	1	72
Optometrist	0	1	0	0	4	5
Orthopaedic Technologist	2	4	4	2	3	15
Other Professionals	311	1,133	1,151	943	336	3,874

Pharmaceutical Technologist	38	87	67	39	5	236
Pharmacist	34	163	90	36	16	339
Physiotherapist	29	43	28	16	2	118
Physiotherapist Assistant	1	3	6	1	1	12
Radiographer	0	3	4	1	1	9
Radiographic Assistant Technician	3	8	7	4	1	23
Radiologic Technologist	4	46	48	28	1	127
Radiotherapist	0	0	1	1	1	3
Radiotherapy Technologist	3	4	3	2	1	13
Support Staff	134	620	961	930	301	2,946
Grand Total	7,125	17,673	19,658	16,511	3,482	64,449

Region distribution by occupation/cadre

As expected, there is a concentration of trained health workers in the regions with zonal hospitals (Dar es Salaam, Kilimanjaro, Mbeya and Mwanza) (Table 3.5). The hard-to-reach regions (Mtwara, Lindi, Kigoma, Rukwa) also have a lower percentage of the workers compared with the others, more for the highly trained ones.

Table 3.4: Regional distribution of workers

Region	Assist. Biomedical Engineering Technician	Assistant Dental Officer	Assistant Dental Surgeon Officer	Assistant Dental Technologist	Assistant Environmental Health Officer	Assistant Laboratory Technologist	Assistant Medical Officer	Assistant Nursing Officer	Assistant Optometric Technologist	Assistant Orthopedic Technologist	Assistant Pharmaceutical Technologist	Assistant Radiologic Technologist	Assistant Radiotherapy Technologist	Assistant Technologist
Arusha	-	8		-	52	49	60	169	1	-	2	5	-	2
Dar es Salaam	-	15		3	99	75	218	417	-	-	4	2	-	8
Dodoma	-	9		-	103	62	84	148	1	-	1	-	-	3
Iringa	-	11	1	-	65	42	72	174	-	-	3	-	-	11
Kagera	-	6		-	102	58	72	303	-	-	6	3	-	14
Kigoma	-	3		-	59	35	66	101	-	1	4	1	-	3
Kilimanjaro	4	13	1	-	73	71	142	507	1	-	9	2	-	2
Lindi	-	5		-	52	25	57	118	-	-	2	2	-	2
Manyara	-	4		-	45	53	46	191	1	-	9	4	-	1
Mara	-	5		-	65	59	45	115	-	-	4	2	-	5
Mbeya	-	14	1	1	131	92	130	295	-	-	10	4	-	11
Morogoro	2	13		1	114	43	127	212	-	-	1	2	-	7
Mtwara	-	3		-	43	21	47	117	1	-	-	-	-	4
Mwanza	-	14		1	183	80	81	422	-	-	7	5	-	26
Pwani	-	8		-	62	35	66	73	-	-	-	3	-	1
Rukwa	-	3		-	57	23	53	76	-	-	3	1	-	1
Ruvuma	-	9		-	64	37	67	113	-	-	-	-	-	5
Shinyanga	-	6		3	104	109	81	242	-	-	4	4	1	12
Singida	1	3		-	40	68	48	108	-	-	2	4	-	1
Tabora	-	5		1	60	43	49	156	-	-	8	1	-	6
Tanga	1	12		-	81	37	130	191	-	-	2	1	1	3
Grand Total	8	169	3	10	1,654	1,117	1,741	4,248	5	1	81	46	2	128

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Region	Biomedical Engineer	Biomedical Engineering Technician	Chemist	Chemist Assistant	Clinical Assistant	Clinical Officer	Consultant Doctor	Dental Assistant	Dental Consultant	Dental Laboratory Technologist	Dental Specialist	Dental Surgeon	Dental Technologist
Arusha	-	-	1	-	22	230	2			-	-	5	1
Dar es Salaam	-	8	2	-	50	691			1	6	9	20	3
Dodoma	-	-	-	2	50	306	1	1		4	1	10	1
Iringa	-	-	-	1	66	317		1		1	-	6	1
Kagera	1	1	-	-	50	246				1	1	1	1
Kigoma	-	-	-	-	48	126				-	-	2	1
Kilimanjaro	1	1	-	-	52	403	5			-	1	5	2
Lindi	1	-	-	-	25	167				-	-	5	1
Manyara	-	-	-	-	36	142				-	-	3	-
Mara	-	-	-	-	42	196				1	1	1	-
Mbeya	1	-	-	-	118	389		2		1	-	6	1
Morogoro	-	-	-	1	58	483				-	1	5	-
Mtwara	-	-	-	-	24	150				-	-	1	1
Mwanza	1	3	-	1	88	366				2	3	5	-
Pwani	-	1	-	-	11	374				-	-	5	1
Rukwa	-	-	-	-	43	143				-	-	2	-
Ruvuma	-	-	-	-	71	217				-	-	1	2
Shinyanga	-	-	-	-	111	275				-	-	3	-
Singida	-	-	-	1	26	141	1			1	1	1	-
Tabora	-	-	-	-	45	141				-	-	1	-
Tanga	-	1	-	-	60	447		3		-	-	11	1
Grand Total	5	15	3	6	1,096	5,950	9	7	1	17	18	99	17

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Region	Dental Therapist	Environmental Health Officer	Health Laboratory Assistant	Health Laboratory Scientist	Health Secretary	Health Technologist	Laboratory Technician	Medical Attendants	Medical Consultants	Medical Doctor
Arusha	4	17	5	1	10	-	-	605	3	45
Dar es Salaam	9	101	26	44	28	4	5	1,454	-	223
Dodoma	6	14	10	10	15	1	-	823	-	79
Iringa	22	16	6	1	20	1	-	959	-	52
Kagera	5	20	1	2	18	-	-	1,071	-	26
Kigoma	-	6	4	-	13	-	-	662	-	16
Kilimanjaro	10	21	5	6	24	-	-	1,765	2	91
Lindi	6	4	-	-	10	-	-	714	-	19
Manyara	2	4	5	-	12	-	-	550	-	21
Mara	1	12	-	-	10	-	-	627	-	30
Mbeya	35	19	1	2	23	-	-	1,682	-	128
Morogoro	28	26	48	5	15	-	-	944	-	66
Mtwara	1	7	1	-	10	-	-	507	-	24
Mwanza	10	26	16	1	21	1	5	1,445	11	128
Pwani	9	14	4	3	12	-	-	530	-	32
Rukwa	4	5	1	2	7	-	-	680	-	17
Ruvuma	7	15	8	1	12	5	-	1,020	-	26
Shinyanga	3	10	5	2	14	-	-	1,054	-	29
Singida	5	16	-	-	7	-	-	660	-	17
Tabora	2	4	6	4	14	-	-	585	-	11
Tanga	18	36	4	2	22	-	-	1,315	-	55
Grand Total	187	393	156	86	317	12	10	19,652	16	1,135

...continued

Region	Medical Laboratory Technologist	Medical Specialist	Nurse & Nurse Midwives	Nursing Officer	Nutrition Assistant	Nutrition Officer	Occupational Therapist	Occupational Therapist Assistant	Optometric Technologist
Arusha	27	6	425	73	1	-	1	-	6
Dar es Salaam	85	141	1,274	1,183	1	20	7	1	10
Dodoma	38	7	748	92	-	3	1	-	8
Iringa	73	4	1,011	44	1	3	-	-	4
Kagera	27	1	788	59	1	1	1	-	1
Kigoma	15	2	414	24	-	-	-	-	3
Kilimanjaro	67	32	1,065	135	-	4	6	-	4
Lindi	15	1	350	7	-	-	-	-	2
Manyara	10	3	385	34	-	2	-	-	2
Mara	27	1	622	35	-	2	-	-	3
Mbeya	96	11	1,211	160	-	9	-	-	11
Morogoro	28	7	749	169	-	1	1	-	1
Mtwara	8	1	350	24	-	-	-	-	-
Mwanza	67	58	1,179	80	1	2	3	1	5
Pwani	14	6	314	132	-	-	-	-	-
Rukwa	16	2	332	16	-	-	-	-	2
Ruvuma	34	9	652	41	-	5	-	-	1
Shinyanga	26	1	642	18	-	1	-	-	5
Singida	19	4	471	58	-	6	-	-	2
Tabora	12	-	385	23	-	-	-	-	1
Tanga	31	3	729	49	-	1	-	-	1
Grand Total	735	300	14,096	2,456	5	60	20	2	72

Urban/rural distribution by occupation/cadre

Only 32,036(55%) health workers are serving the rural population which is 75% of the total population. There are even fewer specialised cadres including specialist medical practitioners, nursing professionals, dentists, pharmacists and physiotherapists.

Table 3.5: Urban/Rural distribution of workers

Professional	HRH Available			Percentage		
	Urban	Rural	Total	% Urban	% Rural	Total
Assistant Biomedical Engineering Technician	1	7	8	12.50%	87.50%	100.00%
Assistant Dental Officer	60	109	169	35.50%	64.50%	100.00%
Assistant Dental Surgeon Officer	1	2	3	33.33%	66.67%	100.00%
Assistant Dental Technologist	5	5	10	50.00%	50.00%	100.00%
Assistant Environmental Health Officer	310	808	1,118	27.73%	72.27%	100.00%
Assistant Laboratory Technologist	351	766	1,117	31.42%	68.58%	100.00%
Assistant Medical Officer	673	1,068	1,741	38.66%	61.34%	100.00%
Assistant Nursing Officer	1,854	2,394	4,248	43.64%	56.36%	100.00%
Assistant Optometric Technologist	4	1	5	80.00%	20.00%	100.00%
Assistant Orthopedic Technologist	1	0	1	100.00%	0.00%	100.00%
Assistant Pharmaceutical Technologist	32	49	81	39.51%	60.49%	100.00%
Assistant Radiologic Technologist	11	35	46	23.91%	76.09%	100.00%
Assistant Radiotherapy Technologist	0	2	2	0.00%	100.00%	100.00%
Assistant Technologist	32	96	128	25.00%	75.00%	100.00%
Biomedical Engineer	3	2	5	60.00%	40.00%	100.00%
Biomedical Engineering Technician	12	3	15	80.00%	20.00%	100.00%
Chemist	2	1	3	66.67%	33.33%	100.00%
Chemist Assistant	3	3	6	50.00%	50.00%	100.00%
Clinical Assistant	157	939	1,096	14.32%	85.68%	100.00%
Clinical Officer	1,646	4,304	5,950	27.66%	72.34%	100.00%

...continued

Professional	HRH Available			Percentage		
	Urban	Rural	Total	% Urban	% Rural	Total
Dental Assistant	5	2	7	71.43%	28.57%	100.00%
Dental Laboratory Technologist	14	3	17	82.35%	17.65%	100.00%
Dental Surgeon	67	32	99	67.68%	32.32%	100.00%
Dental Technologist	15	2	17	88.24%	11.76%	100.00%
Dental Therapist	57	130	187	30.48%	69.52%	100.00%
Environmental Health Officers	338	591	929	36.38%	73.62%	100.00%
Health Laboratory Assistant	64	92	156	41.03%	58.97%	100.00%
Health Laboratory Scientist	72	14	86	83.72%	16.28%	100.00%
Health Recorder / Health Records Technician	88	30	118	74.58%	25.42%	100.00%
Health Secretary	109	208	317	34.38%	65.62%	100.00%
Health Technologist	63	26	89	70.78%	29.22%	100.00%
Medical Attendants	6,450	13,230	19,680	32.77%	77.23%	100.00%
Medical Doctor	787	348	1,135	69.34%	30.66%	100.00%
Medical Laboratory Technologist	401	344	745	53.83%	46.17%	100.00%
Medical Record Officer	57	41	98	58.16%	41.84%	100.00%
Medical Record Technician	133	121	254	52.36%	47.64%	100.00%
Medical Specialists/ Consultants	311	35	346	89.88%	10.12%	100.00%
Nurse & Nurse Midwives	5,141	8,955	14,096	36.47%	63.53%	100.00%
Nursing Officer	1,737	719	2,456	70.72%	29.28%	100.00%
Nutrition Assistant	2	3	5	40.00%	60.00%	100.00%
Nutrition Officer	41	19	60	68.33%	31.67%	100.00%
Occupational Therapist	16	4	20	80.00%	20.00%	100.00%
Occupational Therapist Assistant	2	0	2	100.00%	0.00%	100.00%
Optometric Technologist	50	22	72	69.44%	30.56%	100.00%
Optometrist	5	0	5	100.00%	0.00%	100.00%
Orthopaedic Technologist	12	3	15	80.00%	20.00%	100.00%
Other Professionals	2,514	1,360	3,874	64.89%	35.11%	100.00%
Pharmaceutical Technologist	98	138	236	41.53%	58.47%	100.00%
Pharmacist	224	115	339	66.08%	33.92%	100.00%

...continued

Professional	HRH Available			Percentage		
	Urban	Rural	Total	% Urban	% Rural	Total
Physiotherapist	90	28	118	76.27%	23.73%	100.00%
Physiotherapist Assistant	6	6	12	50.00%	50.00%	100.00%
Radiographer	9	0	9	100.00%	0.00%	100.00%
Radiographic Assistant Technician	23	0	23	100.00%	0.00%	100.00%
Radiography Technician	2	0	2	100.00%	0.00%	100.00%
Radiologic Technologist	109	16	125	87.20%	12.80%	100.00%
Radiotherapist	2	1	3	66.67%	33.33%	100.00%
Radiotherapy Technologist	13	0	13	100.00%	0.00%	100.00%
Support Staff	1,153	1,793	2,946	39.14%	60.86%	100.00%
Grand Total	25,424	39,025	64,449	39.45%	60.55%	100.00%

Distribution by occupation/cadre and ownership

At the time of analysis, about 12,074 of the expected 16,000 health workers in the private sector had been entered into the database whilst 52,375 of Public employees were entered into the data base. Therefore the table below reflect the current true picture. It will be revised when the data entry is complete.

Table 3.6 Distribution by occupation/cadre and ownership

Profession	HRH Ownership			Ownership by Percentage		
	Public	Private & FBOs	Total	Public	Private & FBOs	Total
Assist. Biomedical Engineering Technician	1	7	**8**	12.50%	87.50%	**100.00%**
Assistant Dental Officer	154	15	**169**	91.12%	8.88%	**100.00%**
Assistant Dental Surgeon Officer	1	2	**3**	33.33%	66.67%	**100.00%**
Assistant Dental Technologist	7	3	**10**	70.00%	30.00%	**100.00%**
Assistant Laboratory Technologist	744	373	**1,117**	66.61%	33.39%	**100.00%**
Assistant Medical Officer	1,489	252	**1,741**	85.53%	14.47%	**100.00%**
Assistant Nursing Officer	3,489	759	**4,248**	82.13%	17.87%	**100.00%**
Assistant Optometric Technologist	5	0	**5**	100.00%	0.00%	**100.00%**
Assistant Orthopedic Technologist	1	0	**1**	100.00%	0.00%	**100.00%**
Assistant Pharmaceutical Technologist	55	26	**81**	67.90%	32.10%	**100.00%**
Assistant Radiologic Technologist	30	16	**46**	65.22%	34.78%	**100.00%**

...continued

Profession	HRH Ownership			Ownership by Percentage		
	Public	Private & FBOs	Total	Public	Private & FBOs	Total
Assistant Radiotherapy Technologist	1	1	**2**	50.00%	50.00%	**100.00%**
Assistant Technologist	85	43	**128**	66.41%	33.59%	**100.00%**
Biomedical Engineer	4	1	**5**	80.00%	20.00%	**100.00%**
Biomedical Engineering Technician	12	3	**15**	80.00%	20.00%	**100.00%**
Chemist	3	0	**3**	100.00%	0.00%	**100.00%**
Chemist Assistant	5	1	**6**	83.33%	16.67%	**100.00%**
Clinical Assistant	961	135	**1,096**	87.68%	12.32%	**100.00%**
Clinical Officer	5,292	658	**5,950**	88.94%	11.06%	**100.00%**
Dental Assistant	5	2	**7**	71.43%	28.57%	**100.00%**
Dental Laboratory Technologist	12	5	**17**	70.59%	29.41%	**100.00%**
Dental Surgeon	94	5	**99**	94.95%	5.05%	**100.00%**
Dental Technologist	16	1	**17**	94.12%	5.88%	**100.00%**
Dental Therapist	169	18	**187**	90.37%	9.63%	**100.00%**
Environmental Assistants/Officers	2,017	30	**2,047**	98.53%	1.47%	**100.00%**
Health Attendant	13	1	**14**	92.86%	7.14%	**100.00%**
Health Laboratory Assistant	48	20	**68**	70.59%	29.41%	**100.00%**
Health Laboratory Scientist	71	11	**82**	86.59%	13.41%	**100.00%**
Health Recorder	97	19	**116**	83.62%	16.38%	**100.00%**
Health Records Technician	2	0	**2**	100.00%	0.00%	**100.00%**
Health Secretary	276	41	**317**	87.07%	12.93%	**100.00%**
Health Technologist	5	7	**12**	41.67%	58.33%	**100.00%**
Laboratory Assistant	35	53	**88**	39.77%	60.23%	**100.00%**
Laboratory Technician	9	1	**10**	90.00%	10.00%	**100.00%**
Laboratory Technologist	561	147	**708**	79.24%	20.76%	**100.00%**
Medical Attendants	15,624	4,028	**19,652**	79.50%	20.50%	**100.00%**
Medical Doctor	950	185	**1,135**	83.70%	16.30%	**100.00%**
Medical Laboratory Technologist	21	6	**27**	77.78%	22.22%	**100.00%**
Medical Record Officer	80	18	**98**	81.63%	18.37%	**100.00%**
Medical Record Technician	206	48	**254**	81.10%	18.90%	**100.00%**
Medical Specialists/Consultants	265	79	344	77.03%	22.97%	**100.00%**
Nurses & Nurse Midwives	11,706	2,390	**14,096**	83.04%	16.96%	**100.00%**
Nursing Officer	2,144	312	**2,456**	87.30%	12.70%	**100.00%**

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Profession	HRH Ownership			Ownership by Percentage		
	Public	Private & FBOs	Total	Public	Private & FBOs	Total
Nutrition Assistant	5	0	**5**	100.00%	0.00%	**100.00%**
Nutrition Officer	57	3	**60**	95.00%	5.00%	**100.00%**
Occupational Therapist	20	0	**20**	100.00%	0.00%	**100.00%**
Occupational Therapist Assistant	2	0	**2**	100.00%	0.00%	**100.00%**
Optometric Technologist	69	3	**72**	95.83%	4.17%	**100.00%**
Optometrist	4	1	**5**	80.00%	20.00%	**100.00%**
Orthopaedic Technologist	2	1	**3**	66.67%	33.33%	**100.00%**
Orthopedic Technologist	10	2	**12**	83.33%	16.67%	**100.00%**
Other Professionals	2,725	1,147	**3874**	70.38%	9.602%	**100.00%**
Pathologist	0	2	**2**	0.00%	100.00%	**100.00%**
Pharmaceutical Technician	7	5	**12**	58.33%	41.67%	**100.00%**
Pharmaceutical Technologist	198	26	**224**	88.39%	11.61%	**100.00%**
Pharmacist	305	34	**339**	89.97%	10.03%	**100.00%**
Physiotherapist	108	10	**118**	91.53%	8.47%	**100.00%**
Physiotherapist Assistant	8	4	**12**	66.67%	33.33%	**100.00%**
Principal Health Laboratory Scientist II	4	0	**4**	100.00%	0.00%	**100.00%**
Radiographer	9	0	**9**	100.00%	0.00%	**100.00%**
Radiographic Assistant Technician	12	11	**23**	52.17%	47.83%	**100.00%**
Radiography Technician	2	0	**2**	100.00%	0.00%	**100.00%**
Radiologic Technologist	107	18	**125**	85.60%	14.40%	**100.00%**
Radiotherapist	2	1	**3**	66.67%	33.33%	**100.00%**
Radiotherapy Technologist	9	4	**13**	69.23%	30.77%	**100.00%**
Receptionist	2	0	**2**	100.00%	0.00%	**100.00%**
Support Staff	1,910	1,036	**2,946**	64.83%	35.17%	**100.00%**
Technician	7	19	**26**	26.92%	73.08%	**100.00%**
Technologist	26	25	**51**	50.98%	49.02%	**100.00%**
Grand Total	**52,375**	**12,074**	**64,449**	**81.27%**	**18.73%**	**100.00%**

Source: HRHIS & TIIS April, 2013

4: HRH PRODUCTION

4.1 Pre-Service Training

Non-degree training program for health professionals falls under MOHSW with accreditation by the National Council for Technical Education (NACTE), (http://www.nacte.go.tz/accreditation/about.php). The accreditation criteria require institutions to have programs and quality assurance systems in place that ensures educational standards and capability of providing the established qualifications.

Entrants into the courses should have certificate award from secondary school education, for the pre service applicants. In-service training is offered to allow cadres to move up the professional ladder, motivate staff and improve performance. The entry qualifications are set by NACTE but selection of entrants into the courses and examinations are set by MOHSW.

Training of health workers at degree level is a responsibility of the Ministry of Education and Vocational Training and is regulated by the Tanzania Commission for Universities (TCU). Table 4.1 below shows the courses available, the owners of the training institutions and the awards granted.

There are 131 pre service institutions registered as health professional training institutions: (70 Government, 52 FBO and 9 Private owned, 10 University programs)

Table 4.1: Number of Training Institutions by type of ownership

Type of training institution	Type of ownership			Total
	Public	Private not for profit, FBOs	Private for Profit	
Medicine	2	6	2	10
Clinical Officer	5	3	5	13
Clinical Assistant	6	0	0	6
Dentistry	2	1	0	3
Pharmacy	2	1	0	3
Nursing & Midwifery	31	35	2	68
Paramedical (Laboratory)	4	4	0	8
Paramedical (Radiology)	0	1	0	1
Paramedical (OT/PT)	4	0	0	4
Paramedical (Optometry)	1	0	0	1
Environnement & public Heath	6	0	0	6
Heath Record	1	0	0	1
Assistant Medical Officer	5	1	0	6
Assistant Dental Officer	1	0	0	1
Total number of courses	**70**	**52**	**9**	**131**

Ministry of Health and Social Welfare has established Training Institution Information System. This system is designed to capture three components: 1) General information of training institutions, 2) Staff information, and 3) Students information. The information captured will support MoHSW to manage training institutions and improve planning. At the same time, this system will also help training institutions to manage their own resources for day-to-day management and development of the institution.

The government supports higher education by providing students (in both public and private higher institutions of learning) with soft loans to cover both tuition fee and living expenses. The actual amount depends on available funds and the student's performance in the higher secondary school living certificate examination. All students in medical colleges are fully sponsored while Students in the non-degree courses run by MOHSW have no loans but are charged subsidized accommodation and meals in a cost-sharing arrangement.

Tanzania has a severe shortage of all health trained professionals not only at health delivery point but as well as in all Health Training Institutions as per staff status shown in the table 4.2. On the other hand, the government wishes to ensure access to health services to all citizens through ensuring that there is a dispensary in every village and a health centre in every ward in the country. This implies more than doubling the current number of health facilities. To address the HRH problem, in 2007, the government embarked on a Primary Health Service Development Programme (PHSDP). As part of the programme, the duration of training was reduced for some of the courses, the intake for each of the cadres was increased (Table 4.3), the physical infrastructure of many of the schools is being rehabilitated or increased (classrooms, laboratories, dormitories), shortage of essential training materials and teaching staff are gradually being addressed. The staffing levels of all training institutions are being reviewed alongside with those of all health facilities.

Figure 4.1: Aggregated Staff in Health Training Institution for Academic year 2012/2013

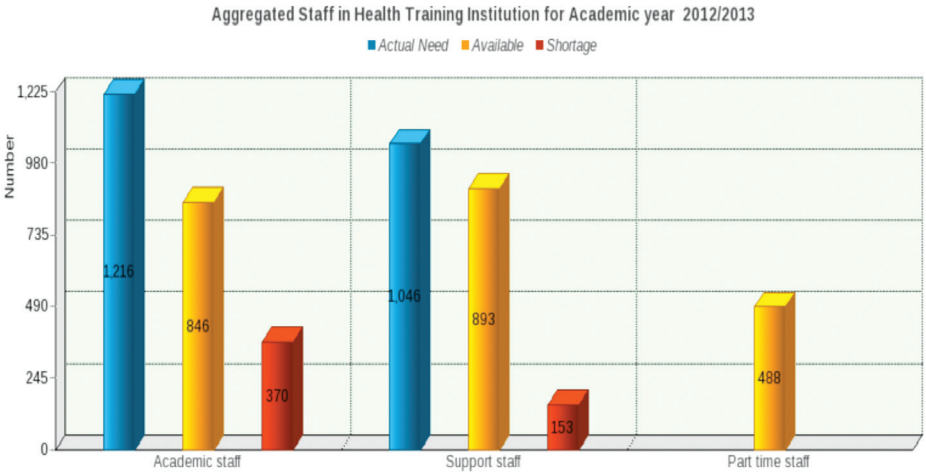

Table 4.2: Number of entrants and Outputs year 2009– 2013

Nursing Courses								
Enrolment					**Output**			
Programme	2009/2010	2010/2011	2011/2012	2012/2013	2009/2010	2010/2011	2011/2012	2012/2013
Certificate	1627	2354	1921	1915	1437	1136	1616	1560
Diploma	1547	1988	2148	1408	1168	1777	1207	1158
Advanced Diploma	81	53	0	0	74	58	20	72
Bachelor	99	200	263	275	114	122	144	154
Sub Total	3354	4595	4332	3598	2793	3093	2987	2944
Allied Sciences								
Enrolment					**Output**			
	2009/2010	2010/2011	2011/2012	2012/2013	2009/2010	2010/2011	2011/2012	2012/2013
Certificate	758	969	830	703	644	790	647	833
Diploma	1121	1350	1398	1229	850	946	1018	844
Advanced Diploma	343	311	300	244	315	337	277	307
Bachelor	625	864	1074	921	490	671	433	952
Sub Total	2847	3494	3602	3148	2299	2744	2375	2936

There has been an increase of enrollment in order to meet Primary Health Service Development Programme (MMAM) requirements.

4.2 In-Service and Continuing Education

Currently, the in-service training is geared towards enabling staff to advance from one level to another. For example Clinical Assistant (certificate) advance to Clinical Officers (CO, diploma), COs advance to Assistant Medical Officers (AMOs, advanced diploma) and a similar picture pertains for nurses: moving from Trained/Enrolled Nurse (certificate) to Assistant Nursing Officer (diploma) and Assistant Nursing Officer (advanced diploma) and Nursing Officer (degree). The degree holders for both Nurses and doctors may still move up the ladder through masters to PhD, provided that they attain the required entry qualifications.

A more or less similar picture applies to Laboratory, Pharmacy and Radiology cadres. For all the cadres, the main problem has been lack of necessary credits for enrolment into the next higher level. Distance education is being encouraged to enable more staff to enroll.

Continuing medical education with aim of obtaining higher qualification is lacking for most health workers. Nursing and Midwifery Council has introduced re-registration of all nurses every two years, requiring evidence of CME before re-registration. It is hoped that this will lead to increased CME efforts by individuals hence improved nursing care. A similar arrangement is being arranged for doctors.

For in-service training, public health workers are fully supported and continue to receive full salary during the training. In-service public schools also enroll health workers from private health facilities, based on the entry qualifications.

Various trainings are organized to meet special needs like HIV/AIDS, new malaria treatment, quality improvement in health care, etc. Unfortunately these are not very well coordinated resulting in unequal exposure of these courses among health workers.

Given the importance of CME, MOHSW has divided the country into eight zones each with a Zonal Health Resource Centre to oversee in-service training in the respective area. There are 67 public, 47 FBOs and 5 private Health Training Institutions for in-service training distributed all over the country. MOHSW has established meetings of principals of Health Training Institutions to improve coordination of training functions. The meetings provide forum for discussion on issues encountering pertaining to the training institutions and informs MOHSW of the challenges that training institutions.

The Training Institutions have been carrying out the CME with a lot of financial constraints. The funding shortages in public institutions have not spared schools, resulting in shortages of even teaching staff. These however, are being addressed through the PHSDP. In the academic year (2012/2013), a total of 450 postsgraduate students sponsored by the Government through the Ministry continues with their studies in the country(415) and outside the country are (35) as depicted in the table below:

Table 4.3: Summary of Postgradute students (2012/13).

No.	INSTITUTION/COUNTRY	Year 1	Year 2	Year 3	Year 4	Total
	IN THE COUNTRY					
1.	Muhimbili(MUHAS)	70	118	84	-	277
2.	Bugando (CUHAS)	12	9	25	-	46
3.	Tumaini(KCM College)	13	11	27	17	68
4.	Herbert Kairuki(HKMU)	2	1	5	9	17
7.	IMTU	2	3	2	-	7
	SUB TOTAL	**104**	**142**	**143**	**26**	**415**
	OUT SIDE THE COUNTRY					
9.	Kenya	-	1	3	-	4
10.	Uganda	5	-	1	-	6
11.	South Africa	-	-	5	2	7
12.	Russia	-	2	10	-	12
13.	UK	-	1	-	-	1
14	India	-	1	-	-	1
15.	Cuba	-	-	-	2	2
16.	Canada	-	1	-	-	1
	China	1	-	-	-	1
	SUB TOTAL	**6**	**6**	**19**	**4**	**35**
	GRAND TOTAL	**110**	**148**	**162**	**30**	**450**

4.3 Health Workforce Requirements

The number of health workers is increased from 42% (56,600) of the year 2011/12 to 64,449 of the year 2012/13 equivalent to 48% in 2012 while the total required is 133, 572 as per 1999 Staffing Levels (see table 4.4 below). The numbers shown do not include trainers required by universities of health.

Table 4.4: Health Work Force Requirements

Code	Occupational Category	Public	Private	Total
1	Generalist Medical Practitioners	2,042	637	2,679
2	Specialist Medical Practitioners	1,394	9	1,403
3	Nursing Professionals	16,089	5,702	21,791
4	Nursing Associate Professionals	24,759	10,418	35,177
5	Midwifery Professionals	0	0	0
6	Midwifery Associate Professionals	0	0	0
7	Paramedical Practitioners	7,825	3,444	11,269
8	Dentists	336	105	441
9	Dental Assistants and Therapists	1,393	590	1,983
10	Pharmacists	431	121	552
11	Pharmaceutical Technicians and Assistants	5,947	1,960	7,907
12	Environmental and Occupational Health & Hygiene Workers	472	110	582
13	Physiotherapists and Physiotherapy Assistants	476	198	674
14	Optometrists and Opticians	392	198	590
15	Medical Imaging and Therapeutic Equipment Operators	283	0	283
16	Medical and Pathology Laboratory Technicians	6,592	2,330	8,922
17	Medical and Dental Prosthetic Technicians	85	0	85
18	Community Health Workers	0	0	0
19	Medical Assistants	0	0	0
20	Traditional and Complementary Medicine Practitioners	0	0	0
21	Other Health Service Providers	1,753	696	2,449
22	Health Care Assistants and Other Personal Care Workers in Health Services	16,693	6,300	22,993
23	Other Science Professionals and Technicians	19	0	19
24	Health Service Managers	495	164	659
25	Medical Records and Health Information Technicians	1,840	749	2,589
26	Other Health Management and Support Workers	7,152	3,373	10,525
	Total	**96,468**	**37,104**	**133,572**

Note: The health workforce requirement has been computed based on 1999 staffing level.

5: HRH UTILIZATION

5.1 Recruitment

Recruitment in the health sector is a multisectoral function; it involves PMORALG through Councils which are charged with the responsibility of identification of new employment posts. Likewise PO-PSM is charged with the responsibility of rationalisation, validation and approves new employment posts. Ministry of Health and Social Welfare is responsible for advertising and posting of health workers to relevant authorities and the Ministry of Finance which is responsible for financing new posts in form of salaries.

Challenges of recruitment process include low human resource management capacity in the councils, limited allocations for personnel emoluments, poor working conditions (roads, communication network, electricity, recreation, water, and schools for children) especially in rural areas, limited ability of the health sector to meet the basic employee personal needs (including pay for extra/ heavy workloads, workplace hazard allowance and opportunities for self development) and brain drain within and outside the country.

Table 5.1: Health Workers Recruitment Trends 2005/2006 – 2011/2012

Year	New Positions Granted by PO-PSM/Treasury	Number of Graduates Posted by MOHSW for Recruitment by Councils
2005/2006	1,677	983
2006/2007	3,890	3,669
2007/2008	6,437	4,812
2008/2009	5,241	3,010
2009/2010	6,257	4,090
2010/2011	7,471	5,704
2011/2012	9,391	6,400
2012/2013	8,602	5,720
Total	**48,966**	**34,388**

5.2 Deployment and Distribution Mechanism

Each district manages its own staff in terms of salary payment. This mechanism has made it difficult for employees to be transfered to other Council unless the place where he/she wants to go has an available funded post. Employees may however be transferred from one facility to another within the council.

5.3 Working Environment

Monthly salaries of public servants are from Treasury. In the past, many allowances were payable but the government decided to consolidate them into the salary, The salaries of public employees do not meet the standard of living and therefore health workers are in constant complaint of low salary.

Despite the low salary, the government salaries for health workers are relatively higher than those paid by faith based institutions. The difference has led to movement of staff from FBO to Government health facilities, particularly in 2006 when the salary adjustment was effected. The government addressed the situation by paying the salaries of employees of faith based designated district hospitals, at the same level as public employees.

Some benefits are granted to all public employees include a contributory health insurance (3% employee, 3% government) and a contributory social security scheme (GEPF, NSSF, LAPF, PPF).

There are some incentives such as houses, materials and training opportunity. Material incentives would have filled the gap but again it also implies money of which the councils are short. Housing or housing allowance used to be one good incentive for doctors but this has been recently removed from standing orders. In-service training is appreciated by many, but opportunities are limited.

Many workers are reluctant to work in rural areas; however it has proved to work if basic employment rights are availed on time. This has been examplified by the Benjamin Mkapa HIV/AIDS Foundation initiative to recruit staff and post them to rural where they are paid salaries and basic need on time. The government has been considering incentives for 'hard to reac areas' given the financial limitations it has been difficult to come up with standard incentive package, Individual councils are being challenged to address the problem using local resources.

A total of 6400 health workers were hired in 2011/12, though the trend of increasing health workers is a bit high but number of health workers left the service due to various reason is also a challenge to the Health Sector. by April 2013 a total of 1500 employees retired (see table 5.2). This is just one factor which equates to an attrition rate of 3% per year. This number has to be considered in calculating health worker requirements.

Table 5.2: Number of Government employees lost by the year 2012/2013

PROFESSIONALS	Number
Assistant Biomedical Engineering Technician	4
Assistant Dental Officer	2
Assistant Dental Technologist	1
Assistant Environmental Health Officer	27
Assistant Laboratory Technologist	14
Assistant Medical Officer	48
Assistant Nursing Officer	131
Assistant Pharmaceutical Technologist	5
Assistant Radiologic Technologist	1
Assistant Technologist	4
Biomedical Engineering Technician	1
Clinical Assistant	24
Clinical Officer	153
Dental Specialist	1
Dental Surgeon	2
Dental Technologist	1
Dental Therapist	3
Environmental Health Assistants	12
Environmental Health Officer	7
Medical Attendants	429
Health Laboratory Scientist	3
Health Secretary	7
Laboratory Assistant	2
Laboratory Technologist	16
Medical Doctor	47
Medical Record Officer	3
Medical Record Technician	5
Medical Specialist	8
Nurse & Nurse Midwives	312
Nursing Officer	66
Occupational Therapist	1
Optometric Technologist	2
Pharmaceutical Technologist	6
Pharmacist	4
Physiotherapist	3

Radiologic Technologist	1
Radiotherapy Technologist	1
Other Professionals	90
Support Staff	53
Grand Total	**1,500**

Source: HRHIS & TIIS April, 2013

Council Health Management Teams oversee the health services at both the regional (RHMT) and the district levels (CHMT). These councils compile comprehensive health plans for the council and supervise the respective services. All the council members are trained in management through a District Health Management Course offered at Zonal Training Centres. Hospitals are managed by a hospital boards headed by the doctor in charge of the hospital. In the effort to raise performance in the Public sector, Presidents Office Public Service Management has introduced an Open Performance Review and Appraisal System (OPRAS) for all public employees so as to raise performance for increased productivity.

6: GOVERNANCE FOR HRH

6.1 HRH Policies and Plans

The Government of Tanzania subscribes to a policy of quality health care for all as stated in its vision which is "Health services of high quality, effective, accessible and affordable, delivered by a well performing and sustainable national health system that encourages responsiveness to the needs of the people" and also its mission which is to facilitate the provision of equitable health services by: formulating appropriate policies and guidelines for effective health services, delivered by well motivated HRH to improve health status of the public with emphasis on the most at risk.

The most at risk and vulnerable groups are mothers, children and the elderly. The vulnerable can access health services by having a dispensary in every village and a health centre in every ward. To ensure affordability, all public employees are obliged to contribute to the National Health Insurance and all other members of the community are being encouraged to join a voluntary Community Health Fund for health insurance cover.

To realize these objectives, the Ministry developed and is implementing a ten-year Primary Health Service Development Programme 2007/2008 – 2016/2017 alongside the 2008-2013 five-year Human Resource for Health Strategic Plan and the 3rd Health Sector Strategic Plan. The plan includes construction/ renovation of health facilities and enhanced training, recruitment and deployment of health workers.

6.2 Policy Development, Planning and Managing for HRH

General human resource policies for public employees are a responsibility of the Prime Minister's Office Public Service Department. They approve staffing levels for all public facilities, determine recruitment procedures for public employees and, together with the Treasury, approve salary structures.

Council Health Management Teams oversee the health services at both the regional (RHMT) and the district levels (CHMT). These councils compile comprehensive health plans for the council and supervise the respective services. All the council members are trained in management through a District Health Management Course offered at Zonal Training Centres. Hospitals are managed by a hospital boards headed by the doctor in charge of the hospital. In the effort to raise performance in the Public sector, Presidents Office Public Service Management has introduced an Open Performance Review and Appraisal System (OPRAS) for all public employees so as to raise performance for increased productivity.

At the MOHSW, the Human Resource Development Division is responsible for planning and overseeing implementation of sustainable availability of qualified human resources in the health and social welfare sector.

Its main functions include:

i. To develop policies, plans legislation, guidelines on health and social welfare human resources;

ii. To ensure the development of health and social welfare human resources development plans and budgets;

iii. To provide support to health and social welfare training institutions;

vi Assurance of quality and standards of training;

v. To supervise and monitor training institutions; and

vi To ensure proper fund allocation, utilization and accounting.

vii. Details of the Division are shown in Annex below

Development of HRH policies and plans involve various stakeholders. Under the SWAp mechanism, MoHSW has an HRH working group composed representatives of line ministries, development partners, FBOs, CSOs and private sectors. The HRH working group and SWAp technical committee are involved in the process of policies and plans development. For the implementation of planed activities, Strategic Objective Teams (SO teams) are established under a Health Workforce Initiative. Various stakeholders constitute SO teams with related knowledge and skills of the respective strategic objectives. Details of the HRH Working Group are shown in Annex below. Hiring, deployment and fire of public employees are decentralized to councils and independent departments. Salaries of all public employees are disbursed from Treasury monthly. Evaluation of health workers performance is also decentralized with the provision that any salary increments must be included in the budget to be approved. An Open Performance Review and Appraisal System (OPRAS) for the Public Service was introduced in 2004 for top officials, with plans for roll out to cover all health workers. Meanwhile, promotion and career advancement are awarded based on staff working experience, not performance.

6.3 Professional Regulation

All the main health professional groups have their own professional associations (registered with the Registrar of Societies) and semi-independent regulatory councils (enacted by Parliament). The councils include Tanganyika Medical Council (Doctors, Dentists, AMOs, ADOs, COs & Dental therapists), Nurses and Midwifery Council, Pharmacy Council, the Laboratory Practitioners Council, Optometrists Council, Radiology Council, Environmental Health Practitioners Council and Traditional and Alternative Medicine Practitioners Council). Membership of the professional associations is voluntary but all professionals must

be registered with the appropriate council to practice in Tanzania. Registration must be renewed every three years for nurses: for doctors it is once for life but this is under review annually. The Councils are the disciplinary bodies for the appropriate professionals in matters related to professional conduct. Apart from the associations and councils, there is a statutory workers union for all workers in the health sector in Tanzania (Tanzania Union of Government and Health Employees, TUGHE) which handles all the labour relations issues.

6.4 HRH Information

The Government payroll database contains personal employee's information for all workers paid by Treasury. These include employees in faith based facilities designated as district hospitals and in the faith based regional and zonal hospitals. The database is computerized and each Ministry has at least one person assigned to update the information as soon as changes are received from health facilities. Professional councils have registers of their members but information is not always up to date. The medical council, for example, registers its members only once, the attrition (deaths and departures/brain drain)is not known. The nurses and midwives register was updated in 2011 and will be updated again in 2014.

MOHSW is now setting up a computerized; web based Human Resource Information System (HRHIS) linked to the national Health Information System (HMIS). The system will include both public and private employees. Authorized people will be responsible for entering and updating the information from their district locations provided they have internet access.

6.5 HRH Research

There are a number of HRH specific studies undertaken between 2000 and 2011 but little effort has been made to implement the findings. These need to be assessed in terms of policy and strategic implications arising from the study recommendations and possible application of lessons learned to future policy actions or interventions.

6.6 Stakeholders in HRH

In 2003, acknowledging the HRH crisis facing the country, the Ministry of Health and Social Welfare (MOHSW) in collaboration with Development Partners appointed a multisectoral HRH working group whose aim was to provide a forum for tracking coherence of vision and provide advice on HRH issues. The group currently includes representatives from public, private and Development Partners. Its mission is to provide sound advice and technical directions for sustainable development of HRH in Tanzania within the context of Government development priorities and it is entrusted to facilitate implementation of the milestones set in the Annual Joint Health Sector Review. The current terms of reference (TOR) are shown in Annex 2 below.

REFERENCE

1. Annual Health Statistical Tables and Figures 200119, Ministry of Health & Social Welfare.
2. Human resource for health information system and training institution information system
3. Government Payroll
4. Draft HRH Staffing levels 2012
5. Ministry of Health and Social Welfare Annual Budget Speech
6. The National Bureau of Statistics website (www.nbs.go.tz).
7. CIA World Factbook: July 12, 2011
8. Sensa ya Watu na Makazi 2012, National Bureau of Statistics
9. Tanzania Census 2002, National Bureau of Statistics, 2006
10. The United Republic of Tanzania Population and Housing Censuses, 1967, 1978, 1988 and 2002.
11. Tanzania Household & Budget Survey 2010

Annex 1: Human Resource Development Division of the MOHSW

The Division is led by a Director and has five Sections (each led by an Assistant Director):

- Health Human Resources Planning Section;
- Allied Health Sciences Training Section;
- Nursing Services Training Section;
- Continuing Education and Postgraduate Training Section; and
- Social Welfare Staff Development Section.

The functions of each section are as follows:

Human Resources for Health Planning Section

- Develop and review human resources policy, short and long term plans guidelines and legislations;
- Prepare projection on human resources needs for the sector;
- Develop career structure and succession plan for health workers;
- Maintain an up-to-date inventory of human resources for the sector;
- Coordinate studies on human resources for health and social welfare, rationalize balance, distribution and utilization of human resources; and
- Identify national health training needs in line with Human Resource Strategic Plans.

Allied Health Sciences Training Section

- Prepare and review policy, guidelines and training curricula for allied health sciences training;
- Review and evaluate training plans for the allied health professions;
- Monitor and evaluate implementation of training curricula and programmes for allied health professions;
- Coordinate training programmes for the allied health professions;
- Coordinate and monitor the enrolment of students into the training institutions;
- Review and support training institutions through provision of relevant and appropriate health learning materials;
- Coordinate and monitor the enrolment of students into the training institutions;
- Facilitate and ensure the registration and accreditation of allied health training institutions; and
- Coordinate and monitor the enrolment of students into the training institutions;

Nursing Services Training Section

- Prepare and review policy, guidelines and training curricula for nursing services training;
- Review and evaluate training plans for nursing professionals;
- Monitor and evaluate implementation of training curricula and programmes for nursing professionals;
- Coordinate training programmes for nursing professionals;
- Coordinate and monitor the enrolment of students into the nurses training institutions;
- Review and support training institutions through provisions of relevant and appropriate health learning materials;
- Facilitate and ensure the registration and accreditation of nurse training institutions; and
- Liaise with allied health training institutions boards on matters related to student affairs and welfare

Continuing Education and Postgraduate Training Section

- Prepare and review policy guidelines for continuing education, postgraduate training and distant learning;
- Coordinate Zonal Health Resource Centres' plans;
- Coordinate continuing education and distant learning programmes for health workers;
- Coordinate higher education and postgraduate training;
- Design, plan and evaluate national health training programmes; and
- Promote training and individual development among health staff for re-registration and certification through distant learning.

Social Welfare Staff Development Section

- Develop staff training programmes for pre service, in service, short and refresher courses;
- Develop and review short and long human resource plans;
- Prepare and review projections on human resource needs;
- Develop career structure for social welfare workers;
- Maintain an up-to-date inventory of Social Welfare workers;
- Design, plan and evaluate social welfare training programmes;
- Liaise with appropriate bodies on the recruitment, placement and utilization of human resources;
- Identify national social welfare training needs and interventions; and
- Promote training and individual development among social welfare staff for re-registration and certification through distant learning.

Annex 2: Terms of Reference for the HRH Working Group

Mission of the HRH Working Group

To provide sound advice and technical directions for sustainable development of HRH in Tanzania within the context of Government development priorities.

Strategy

- Provide advisory and technical support to the MOHSW in bringing up relevant policy and strategy basing on wide perspective and focus to enable development of well developed HRH workforce in Tanzania Mainland;
- Multi-sector collaboration and engagement of HRH stakeholders on important HRH issues that impact on the health sectors performance;
- Partnership and advocacy to enhance HRH development: Coordinate and monitor implementations of existing priority HRH issues and plans; and identify important emerging HRH issue that requires attention;.
- Promote information and evidence for decision making; convene regular briefing and advocacy meeting/dialogue on important HRH issues.

Assigned Tasks of the working group

The following tasks are expected of the members of the working group:

(i) To identify and outline implementation arrangements to address current

HRH priorities for the immediate, medium and long term based on sound technical and thematic reports.

(ii) To identify current and emerging systematic barriers to policy and strategy implementation with a view to advice respective authorities timely for remedial measures.

(iii) To assist the MOHSW to develop and implement a multi-sector HRH strategic plan

(iv) To receive and comment on HRH updates from members, sectors, and groups with respect to ongoing or proposed programme, initiatives and action plans.

(v) To provide regular necessary advice existing HRH workforce information

(vi) To provide systematic coordination arrangements for HRH activities in the country

(vii) To provide advice of the required linkages and partnership for HRH development in the country.

(viii) Produce regular reports, briefing papers and disseminate good practices documents on HRH for stakeholders.

(ix) To monitor progress with implementation of HRH strategies in line with existing key policy and plan guidelines and sector reforms milestones.

(x) To undertake any assignment that may from time to time be allocated by the MOHSW.

Terms of appointment

(i) Appointment of the Chair and Co Chair persons will be done by Permanent Secretary.

(ii) Members of the Group will appoint two persons one from the MOHSW and one from outside the MOHSW to become Secretaries and member of the secretariat

(iii) Membership is based on institutional representation with a designated focal personal who is expected to participate actively in the activities of the HRH working group. Terms that members serve is based on the acceptable performance and interest.

(iv) The period of services for appointed members will be for two years, following approval by the Permanent Secretary.

(v) Special efforts are to be undertaken to ensure adequate performance on HRH development.

(vi) Participate in all meetings of the working group

(vii) Maintenance of "Institutional Memory" among the members.

Alternates membership:

(i) Provision for alternate members is provided and recognized subject to existing rules and procedures and the approval of the chairperson of the HRH working group.

(ii) The working group is expected to identify from time to time based on needs for attendance to meetings of alternate members for special periods/issues.

Cessation of Appointment:

(i) Any appointment will be annulled by the appointing authority if the attributes and performance of appointed member is below expectations.

(ii) In the event that s designated member for one reason or the other is unable to continue such notice should be given to the working group in writing at least 3 months ahead of disengagement date to enable necessary replacement.

The tasks and responsibilities of the HRH secretariat:

(i) The HRHWG secretariat will relate with the HRD department of the MOHSW

(ii) Facilitate and guarantee the use of office space and communications systems and designated staff of to facilitate the work and activities of the working group

(iii) Maintain regular communication with the top management of the MOHSW on important HRH issues and initiatives

The secretariat will also Uundertake the following:

Arrangement and organization for all meetings of the working group

(i) Documentation of meetings and production of quality minutes

(ii) Undertake the maintenance and regular up-date of existing HRH workforce information

(iii) Undertake production and distribution of required briefing documents as may be determined from time to time

(iv) Collate and disseminate required information to identified groups and organization as may be required from time to time

(v) Undertake any additional assignments that may from time to time be allocated

(vi) Produce a regular intervals progress reports on important HRH activities.

Annex 3: Regional Distribution of the Population in 2012

Code	Region	Population (million)	
		2002	Census 2012
01	Dodoma	1,692	2,083,588
02	Arusha	1,288	1,694,310
03	Kilimanjaro	1,377	1,640,087
04	Tanga	1,636	2,045,205
05	Morogoro	1,753	2,218,492
06	Pwani	885	1,098,668
07	Dar es Salaam	2,487	4,364,541
08	Lindi	787	864,652
09	Mtwara	1,124	1,270,854
10	Ruvuma	1,114	1,376, 891
11	Iringa	1,491	941,238
12	Mbeya	2,063	2,707,410
13	Singida	1,087	1,370,637
14	Tabora	1,710	2,291,623
15	Rukwa	1,136	1,004,539
16	Kigoma	1,674	2,127,930
17	Shinyanga	2,797	1,534,808
18	Kagera	2,028	2,458,023
19	Mwanza	2,930	2,772,509
20	Mara	1,363	1,743,830
21	Manyara	1,038	1,425,131
22	Njombe		702,097
23	Katavi		564,604
24	Simiyu		1,584,157
25	Geita		1,739,530
	Total	**33,460**	**43,625,354**

Source: Population by Region, Land Area and Density Tanzania Mainland. 2012 Population and Housing Census. National Bureau of Statistics.

Annex 4: Regional Distribution of Hospitals in Tanzania 2012

Region	Designated District Hospital	National	Private	Public	Regional	Regional/ Zonal	Specialist	Faith Based	Zonal	Total
Arusha	3		3	4	1			4		15
Dar es Salaam		1	16	4	5		2	3		40
Dodoma	1			3		1	1	2		8
Iringa	3		3	4				4		17
Iringa					1					1
Kagera	5		1	3	1			6		16
Kigoma	1			2	1			4		8
Kilimanjaro	5		3	3	1		1	4	1	18
Lindi	1			4	1			2		9
Manyara	1			3	1			2		7
Mara	4		1	1	1			2		9
Mbeya	2		2	6	1			6	1	18
Mbeya	1									1
Morogoro	4		1		1			2		13
Mtwara				1		1		1		3
Mwanza	2		4	5	1			2	1	17
Pwani				5	1			1		7
Rukwa	2			1	1					4
Ruvuma	1		1	2	1			4		10
Shinyanga	1		2	4	1					9
Singida	1			2	1			5		9
Tabora	1			3	1			2		7
Tanga	2		2	4	1			4		13
Total	**41**	**1**	**39**	**64**	**23**	**2**	**4**	**60**	**3**	**237**

Annex 5: Number and Owner of Health Training Institutions in Tanzania Mainland 2011

SN	Award	Owner			
		Government	FBOs	Private	Total
1	Degree	2	6	1	9
2	Advanced Diploma	13	4	0	17
3	Diploma	35	33	4	72
4	Certificate	20	15	2	37
	Total	**70**	**58**	**7**	**135**

Annex 6: Tanzania Mainland Health Zones

Zone	Hospital	Regions
Lake	Bugando Medical Centre	Kagera,Geita, Mara and Mwanza,
Western	Kigoma CATC	Kigoma, Shinyanga, Simiyu and Tabora
Northern & Central	Kilimanjaro Christian Medical Centre	Arusha, Kilimanjaro, Manyara, Tanga, Dodoma and Singida
Southern Highlands	PHCI-Iringa	Iringa and Ruvuma
SouthErn West	AMOTC-Mbeya	Mbeya and Rukwa
Eastern	PHN-Morogoro	Dar es Salaam, Pwani and Morogoro
Southern	COTC-Mtwara	Lindi and Mtwara

Annex 7: Growth & Ownership of Health Facilities in Tanzania Mainland 2009-2011

Facility type	Ownership	2009	2010	2011
Dispensaries	Govt	3,711	3,889	3,990
	FBOs	668	625	597
	Parast	166	168	192
	Priv	855	787	790
	Total	**5,400**	**5,469**	**5,607**
Health Centres	Govt	402	434	467
	FBOs	117	134	139
	Parast	8	10	19
	Priv	55	55	59
	Total	**582**	**633**	**684**
Hospitals	Govt	96	95	112
	FBOs	98	101	111
	Parast	7	8	9
	Priv	31	36	33
	Total	**232**	**240**	**264**
Total Health Facilities	**Govt**	**4,209**	**4,418**	**4,569**
	FBOs	**883**	**860**	**847**
	Parast	**181**	**186**	**220**
	Priv	**941**	**878**	**882**
	Total	***6,214***	***6,342***	***6,518***

Annex 8: Number of Health Training Programs

SN	Type of Training	Government	FBO	Private	Total
Degree					
1	Medical Doctors	2	4		**6**
2	Dental Surgeons	1			**1**
3	Nursing (BScN)	2	4	2	**8**
4	Laboratory		1		**1**
5	Pharmacy	1			**1**
6	Environmental Health	1			**1**
	Advanced Diploma				
7	Nursing	8			**8**
8	Clinical Medicine	3	4		**7**
9	Dental	1			**1**
10	Environmental Health	1			**1**
Diploma					
11	Nursing	10	25	3	**38**
12	Laboratory		2		**2**
13	Clinical Officer	11	3	1	**15**
14	Dental	3	1		**4**
15	Pharmacy	2	1		**3**
16	Environmental Health	4			**4**
17	Medical Records		1		**1**
18	Anaesthesia	1			**1**
19	Occupational Therapy	1			**1**
20	Optometry	1			**1**
21	Orthopaedic	1			**1**
22	Physiotherapy	1			**1**
Certificate					
23	Nursing	14	13	1	**28**
24	Laboratory	1	2	1	**4**
25	Clinical Medicine	3			**3**
26	Radiography	2			**2**
	Total	**75**	**61**	**8**	**144**

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