UNITED REPUBLIC OF TANZANIA

MINISTRY OF HEALTH AND SOCIAL WELFARE

# HUMAN RESOURCE FOR HEALTH AND SOCIAL WELFARE COUNTRY PROFILE 2013/2014

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| | |
|---|---|
| **AHWO** | Africa Health Workforce Observatory |
| **APHFTA** | Association of Private Health Facilities of Tanzania |
| **CAS** | Central Admission System |
| **CHF** | Community Health Fund |
| **CHMTs** | Council Health Management Teams |
| **CME** | Continuing Medical Professional |
| **CPE** | Continuing Professional Education |
| **CSSC** | Christian Social Services Commission |
| **FGD** | Focus Group Discussion |
| **HCWs** | Health Care Workers |
| **HIV/AIDS** | Human Immunodeficiency Virus/ Acquired Immunodeficiency Syndrome |
| **HRHSW** | Human Resource for Health |
| **HRHSWIS** | Human Resource for Health and Social WelfareInformation System |
| **HRP** | Human Resource Planning |
| **HSSP** | Health Sector Strategic Plan |
| **ITN's** | Insecticide Treated Nets |
| **MMAM** | Mpango wa Maendeleo ya Afya ya MSINGI (Swahili acronym for PHSDP) |
| **MMR** | Maternal Mortality Rate |
| **MoHSW** | Ministry of Health and Social Welfare |
| **NACTE** | National Council for Technical Education |
| **NMHCP** | National Minimum Health Care Package |
| **PNFP** | Private not for Profit |
| **PHC** | Population Housing Census |
| **PHSDP** | Primary Health Service Development Programme |
| **POPSM** | President's Office Public Service Management |
| **PMORALG** | Prime Minister's Office Regional Administration and Local Government |
| **PMTCT** | Prevention of Mother to Child Transmission |
| **RHMTs** | Regional Health Management Teams |
| **TCU** | Tanzania Commission for University |
| **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 and Social Welfare in key areas. The Ministry has therefore formulated Tanzania Human Resource for Health and Social Welfareand Social Welfare Country Profile booklet to facilitate easy access to the HRHSW 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 HRHSW 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 available data.

Tanzania HRHSW Country Profile provides information on the HRHSW 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 HRHSW that guarantee provision of quality health services to the population.

Renewed approaches to the health workforce agenda are critical for moving towards universal health coverage. We require a workforce that is fit for purpose, able to respond to and deliver accelerated progress and ensure equity. It is important that each year the HRHSW Country Profile be updated as it has proved to be a useful reference in HRHSW. It should also be 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.

It is my hope that health workers and stakeholders will find this document a useful tool in the management of Human Resource for Health and Social Welfare.

Dr. Donan Mmbando
**Chief Medical Officer**

# ACKNOWLEDGEMENT

The process of developing Human Resource for Health and Social Welfare Country Profile involved efforts by different actors. 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 HRHSW Country Profile for Tanzania.

The Ministry of Health and Social Welfare with Special thanks, acknowledge the support of JICA HRHSWDP Tanzania, for their financial support in undertaking the task of establishing HRHSW and Training Institutions data bases which were used to collect and generate information of HRHSW and training from all facilities in the country. These Institutions includes Service delivery facilities, Training Institutions, Employing authorities in the Regions and Districts, Ministry agencies and FBO and Private institutions.

Special acknowledgements goes to writers team within the Ministry. These are; Mrs. E. Mwakalukwa – Assistant Director Human Resource Planning, Technical Officers within the Department of Human Resource Training and Development; Mr. Martin Mapunda, Mr. Hussein Mavunde, Mr. Issa Mbaga, Mr. Denis Busuguli, Mr. Renatus Mashauri from Quality Assurance Department and, Mr. Andrew Makoi from Human Resource Administration and Management Department, Miss Trust Nyondo, Miss Groria and Mr. Claud Kumalija from Department of Policy and Planning and Dr. Nelson Mabruki from Ilala Municipal for their tireless effort to compile the required statistics and writing the document.

The Ministry expresses much gratitude to the Health Workers and various Stakeholders who spent their valuable time entering HRHSW data into HRHIS and TIIS and providing creative facts, comments and insight basing on their experience. These Health Workers are RMOs, RHSs, HMIS Focal persons, DMOs, DHSs, Administrators and Secretaries. Their contribution made very significant step towards development of this HRHSW Country Profile.

Dr. Otilia Gowelle
**Director of Training and Human Resources Development**

# EXECUTIVE SUMMARY

In order to develop and share Human Resources for Health and Social Welfare Information, an idea of developing country observatories came up within WHO system development. One of the outputs of the Observatory is to ensure information sharing on country HRHSW situations. One way to present HRHSW information is to develop HRHSW country profiles.

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

- systematically presenting the HRHSW policies and management situation, in a transparent and comparable way
- communicating with and between policy -makers and stakeholders in the country
- strengthening the human resources information system in the country (by establishing basis for baselines and trends)
- facilitating information sharing and cross-country comparisons.

The Tanzanian HRHSW country profiles is expected to help to monitor trends, contribute towards generation of regional HRHSW profiles, provide comparable data between Tanzania and other countries and conduct secondary analysis to identify points for focused action in the country. This document is also helpful in comparing Tanzania 's responses to HRHSW challenges with her neighbours and also contributes to setting out benchmarks for those areas specific to African region.

## Methodology

This was a generation of data that utilized secondary information emanated from two systems namely HRHIS and TIIS. Information generation was done basically using data entered into these two systems. Additional information was obtained from other departments at the Ministry of Health and Social Welfare at headquarter that are related to human resources for health. Finally documents of the major studies done in the area of human resources for health were reviewed.

## Scope of this HRHSW country profile

This document provides relevant information to support policy-makers, planners and researchers in the development of HRHSW. The following areas have been covered:

- A country profile giving geography and demography, population and economic situation
- Tanzania's health system, its governance and health provision including policy and systems in the context of HRHSW
- Human Resources for Health trends analysis

- Human Resources for Health production including pre-service and post basic training processes
- Human Resources for Health utilization.

# INTRODUCTION

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

The purpose of this HRHSW country profile is to serve as a tool for;

- Providing a comprehensive picture of the health workforce situation and trend in terms of the number of health workers available whether employed or not, by category in the whole sector (for both public and private sector)
- Describing the existing HRHSW polices, the management strategies for monitoring and evaluation
- Describe the communication systems and channels established between policy makers, managers at various levels and stakeholders on the HRHSW functionality
- Present the HRHSW information system in used 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 and section four is presenting HRHSW production, while section five and six an account of the HRHSW utilization and HRHSW 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 HRHSW 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 HRHSW 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 HRHSW development, with focus on health workforce observatories. Similarly, two Regional consultations were organized in the African Region, in 2006 and 2009 to facilitate policy dialogue and share experiences on HRHSW issues.

# 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.

## 1.2 Population composition

The 2012 Population and Housing Census (PHC) for the United Republic of Tanzania was carried out on the 26th August, 2012. This was the fifth Census after the Union of Tanganyika and Zanzibar in 1964. The 2012 Population and Housing Census results show that, Tanzania has a population of 44,928,923 of which 43,625,354 is on Tanzania Mainland and 1,303,569 is in Tanzania Zanzibar. Results of this analysis are presented in Table 1.1 below.

Table 1.1 Percent Population Distribution by Age Group 2002 - 2014

| | 2002 | | 2012 | | 2014(Projection) | |
|---|---|---|---|---|---|---|
| Age Group | Total | % | Total | % | Total | % |
| 0-14 | 14,803,723 | 44.2 | 19,171,368 | 43.9% | 20,263,617 | 44.0% |
| 15-64 | 17,340,189 | 51.8 | 23,219,542 | 53.2% | 24,481,261 | 53.2% |
| 65 and over | 1,317,937 | 3.9 | 1,234,444 | 2.9% | 1,301,011 | 2.8% |
| **Total** | **33,461,849** | **100** | **43,625,354** | **100%** | **46,045,889** | **100%** |

Source: Tanzania 2012 Cencus and 2014 Projection

The table shows that over the past two decades, the youth continued forming the broad base of the population. There has been more or less constant values of the older persons in the age group 65+ from 3.9% 1n 2002 to 2.8 % in 2014.

In the year 2002 over 51% of the population belonged to the age group of more than 15 years. In 2012 this age group's share of the total population increased to over 53%.

On the other hand the share of the group aged 0–14, decreased from 44% in 2002 to 43% in 2012, implying that the dependency ratio is on the slightly decrease. Table 1.2 shows the population distribution by sex for the period 2012-2014.

Table 1.2 Population distribution by sex

| 2012 | | 2014 | |
|---|---|---|---|
| Male | Female | Male | Female |
| **21,869,990** | **23,058,933** | **23,083,438** | **24,338,349** |

Source: Tanzania Census 2012 & 2014 Projection

### 1.3 Economic context

Since 1990s, the Government of Tanzania has been implementing various reforms including economic and health reforms. These reforms have placed Tanzania among the top economic performers in growth and inflation control in Africa. The country has relocated its expenditures to the social sectors including education and health. In the area of health, in financial year 2011/12, the expenditure outturn was TZS 1,050 trilion. In the financial year 2012/13, the approved budget was TZS 1,440 trilion. While budget allocation for 2013/14 was TZS 1,214 trilion.

### 1.4 Political context of Tanzania

The Government of Tanzania (GoT) like many other governments has three arms of state namely, Executive, Legislature and Judiciary. Their roles in shaping the health sector are outlined here below.

### 1.5 Executive

As part of the executive, Tanzania has two cabinet ministers who link government business with all the relevant stakeholders in the health sector. There is one senior Minister and Deputy Minister for Health and Social Welfare. These Ministers report to the Prime Minister and then to the President of the United Republic of Tanzania.

### 1.6 Legislature

There is a social Services Committee of Parliament that is mandated to address issues of social services in the country including health, education water and sanitation. It is mandated to oversee what takes place in the social services of the country. Debates in Parliament incorporate government scenarios together with the views of the opposition parties. Decisions are made after thorough discussion of the scenarios as presented from time to time by different social sectors.

### 1.7 Judiciary

The Judicial system is not directly related to the health sector although the health actions must be within the provisions of the law. If there are issues of contention with regard to health policy implementation, the Judiciary has a pivotal role in shaping the health sector actions resulting from the contentious issues.

## 1.8 Historical perspective

### 1.8.1 Health sector reforms

Tanzania is marking 53th Anniversary since its independence on December this year 2014. During this period Tanzanians has many progresses attained in developing systems that assure sustainable development. Health system development is a fundamental one in development as it is known that a nation with poor health cannot attain optimal development. Recalling the widely agreed definition of health of The World Health Organization (WHO) which states that "Health is the state of complete physical mental, and social well-being and not merely the absence of disease", health is thus considered the very centre of persons' well being and development. It is today widely acknowledged that health is an important component of the development process in the sense that it can help or hinder national development, and that other forces of development can add to or detract from health. Universal health coverage focuses on access to health care and social protection for all citizens.

In 1961 when Mainland Tanzania gained its independence under Mwalimu Julius Kambarage Nyerere, the health sector was a medically oriented and sidelined promotive, preventive and social protection matters. Soon after independence, the efforts were put in place to improving health and social services. This policy change was beneficial to the majority of Tanzanians who live in the rural areas. The services provided in the colonial era were favoring the elites and the well to do in the population.

With the introduction of the Arusha Declaration in 1967, Tanzania pursued a health policy that aimed at providing equal and free access to health facilities and services to the entire population. This was indeed a bold and revolutionary step and stemmed from Mwalimu Nyerere's basic principle and conviction that improving the health and wellbeing of all Tanzanians was the way forward to sustainable development. Health care provision was aimed at reaching rural and urban communities to include the poor who could not afford the cost of health care and those who could afford to pay for their health care. Health services were provided free of charge by government institutions while voluntary agencies charged modest fees. Given the reality that over 80% of the population lived in rural areas; development of the rural health infrastructure was given high priority.

Hospitals were built in each region and there was also a shifting of emphasis from curative to preventive services. These measures allowed the majority of Tanzanians to have access to health services and improve the quality of life. For instance, by 1992 about 72% of the population lived within 5 km of a health facility and 93% lived within 10 km. The life expectancy increased from 35 years in 1961 to 53 in 1983 (which latter on fell to below 50 years after the AIDS pandemic). The Arusha declaration marked the health for all strategy that was later on emphasized by the Global movement towards primary health care as declared in Alma Atta in 1978 by the World health organization. Since then there has been incremental policy changes in the health sector that are locally initiated.

The introduction of user fees arrangements in health care services that was introduced by in response to structural adjustment programs in 1990s by the World Bank and IMF, marked major health sector reforms in the history of Tanzania. In our health policy document, it is also stipulated in the health sector financing arrangements, the issue of exemption and waivers for the poor to ensure that all citizens in the formal and informal sector will have health insurance and enjoy other aspects of social protection.

The establishment of social health insurance through National health insurance fund (NHIF) has increased access to health services for the formal sector employees ensuring social protection to this group. This is one of the important achievement in celebrating 50 years of independence in 2011. In this year, Tanzania celebrates 19 years since establishment of community health fund (CHF) in all districts in Tanzania. The objectives of CHF, as stipulated in the Community Health Fund Act of 2001 include: (i) To mobilize financial resources from the community for provision of health care services to its members; (ii) To provide quality and affordable health care services through sustainable financial mechanism; and (iii) To improve health care services management in the communities through decentralization by empowering the communities in making decisions and by contributing on matters affecting their health. Passing through the important metrics such as life expectancy, quality of life, mortality and morbidity, one will realize we are in the step further. However, we may be termed as laggards when compared with other developing countries that have the same age. The life expectancy has increased from 35 to 56 years regardless of sex.

When it comes to maternal and child health, there is vast litany in reduction of maternal and child mortality through various political slogans, declarations and commitments, leaders forums, high level consultations, activism and directives in election manifesto since independence. In 1961 the maternal mortality was 451 per 100,000 live births, in the 70s through 80s it fell below 200 per 100,000 live births but in 90s to date the mortalities have increased to more than 400 per 100,000 live births. It may be right for the government to address that there is a remarkable achievement in maternal and child mortality and that we are approaching to achieve the millennium goals.

The construction of health facilities in every village is ongoing, and this emphasizes on treatment and sidelines prevention and health promotion. In order to ensure universal health coverage but when you compare the distribution of Human Resource for Health and Social Welfarein the country, you find that there are places that had experienced shortage of human resource since independence Less than 50% of Tanzanians are attended by skilled health workers, most of these workers are in urban areas, there is a devastating scarcity of Human Resource for Health and Social Welfarein rural areas, and thus, rural areas of Tanzania face Human Resource for Health and Social Welfarecrisis in umber and motivation. Those with health related degrees are very scarce in rural areas, especially doctors and pharmacists.

### 1.8.2 Description of Tanzania's model of decentralization

Devolution of powers to lower geographical levels is perhaps the extreme of all types of Decentralization, and it is a model Tanzania seems to have considered to be the most suitable for her needs. The mandate to decentralize the country came from the Local Government Act (1982). According to this Act, the reason for decentralization was to ensure good governance and democratic participation. This is a very big change from the previous centralized arrangement of government.

In Tanzania, the current arrangement of decentralization has the following structure. Below the district level are Divisions, Wards and Villages. This structure is believed to be appropriate in the country today as it is thought to be adequately involving communities in the health service delivery. Under decentralization the lower level structures have been given responsibility to plan, implement and manage development activities not only for health but for other sectors as well. The main objectives of decentralization included among others, Political, Administrative, or Fiscal Federalism.

The Ministry of health and Social Welfare has made very interesting innovations in an effort to decentralize further the management and delivery of health services to lower levels. The Ministry further made great strides when it put in place a National Health Policy and its implementation strategies contained in the Health Sector Strategic Plan (HSSP). It is provided for in the National Health Policy that among other guiding principles, "Equitable distribution of health Services shall be assured throughout the country and priority shall be given to further decentralization of health care delivery system to ensure effective access by all sections of the population to the National Minimum Health Care package (NMHCP)".

## 1.9 Roles and responsibilities

Following the Civil Service Reform and Restructuring of Government and in line with the 1977 Constitution and the Local Government Act (1982), the set up and role of central government vis-à-vis the districts were revised. The centre is now composed of fewer staff mainly concerned with policy formulation, standard-setting, and quality assurance; resource mobilization, capacity building and technical support, provision of nationally coordinated services such as epidemic control, coordination of health services, monitoring and evaluation of the overall sector performance and training. The districts are now implementers of the health and other policies.

## 1.10 Decentralisation and human resource

Along with most social sectors, the health sector has been undergoing a process of decentralizing many responsibilities from central ministries to the district level particularly to the office of the District Medical Officer (DMO) and the Council Health Management Teams (CHMTs). This has had implications on human resource planning and recruitment.

### 1.11 Health status

This section provides a brief summary of Tanzanian's health status; main causes of morbidity and mortality; factors affecting health status; and health indicators and trends, such as life expectancy by sex, mortality by sex, by age (infant, maternal, under five). Currently, the health status of the country is as shown in the health indicators below;

Table 1.3 Health Indicators

| Indicators | Both sex | Male | Female | 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 | 81/1000 | - | - | DHS 2010. |
| Maternal mortality ratio (deaths per 100,000 live births) | - | - | 454 | DHS 2010. |
| HIV/AIDS prevalence rate (15-49 years) | 5.7% | 4.6% | 6.6% | 2011/12 Tanzania HIV/AIDS and Malaria Indicator Survey |
| % with access to safe water | 81.4% urban 46.7% rural | - | - | Tanzania in Figures 2010 |
| % with access to improved sanitation | 29.3% urban 8.7% rural | - | - | Tanzania in Figures 2010 |
| Infant mortality rate | 51/1000 | - | - | DHS 2010 |

Source: DHS-NBS 2014

### 1.12 Burden of Disease and Main Causes of Death

High burden of disease remains a major challenge facing the health sector. The life expectancy has remained below 55 years on average. In spite of a decline in infant and under five mortality, overall Maternal Mortality Ratio (MMR) and prevalence of other major diseases like HIV/AIDS, Malaria and Tuberculosis remain high. New interventions such as Prevention of Mother to Child Transmission (PMTCT), Counselling and Testing, distribution of Insecticide Treated Nets (ITNs) has significantly increased health staff workload. In addition local and international governmental and non-governmental agencies and Programs involved in the research and implementation of these interventions continue to take away staff from traditional health service delivery.

The workforce requirements for most of these Programs are not provided for in the current staffing levels. The country also faces high incidence of non-communicable conditions such as cancers, malnutrition and cardio-vascular diseases. Table 1.4 shows the main causes of morbidity and mortality in the country. The causes suggest the need for more health and social welfare workforce with skill mix.

Table 1.4 Main causes of morbidity and mortality

| Condition | Under five years (%) | |
|---|---|---|
| | Outpatients attendances | Deaths among admissions |
| Peri-natal and Neonates Conditions | - | 7.0 |
| Cardiac Failure | 0.1 | 0.97 |
| Severe Protein Energy Malnutrition | 0.29 | 2.36 |
| HIV/AIDS | 0.11 | 2.24 |
| Congenital Diseases | - | 0.22 |
| Haematological Diseases | - | 0.01 |
| Other Nutritional Disorders | 0.10 | 0.51 |
| Neoplasm | - | 0.03 |
| Diabetes Mellitus | - | 0.09 |
| Tuberculosis | 0.08 | 0.73 |
| Anaemia | 1.84 | 15.77 |
| Non-Inf.Gastrointestinal Diseases (Others) | - | 0.40 |
| Other Cardiovascular | 0.06 | 0.72 |
| Sickle cell Disease | - | 0.27 |
| Poisoning | 0.13 | 0.32 |
| Burns | 0.32 | 1.03 |
| Pneumonia | 9.07 | 15.90 |
| Snake and Insect Bites | -- | 0.50 |
| Malaria- Severe, Complicated | 34.45 | 32.05 |
| Vitamin A Defc/ Exophthalmia | - | 0.00 |
| Hepatitis | 1.4 | 0.15 |
| Cardiac Failure | - | 4.39 |
| GUD | 0.68 | 0.22 |
| Other Cardiovascular Diseases | 0.43 | 1.75 |
| Tuberculosis | 0.53 | 5.18 |
| Severe Protein Energy Malnutrition | 0.11 | 0.15 |
| Hypertension | 0.02 | 4.60 |
| Nutritional Disorders(to a PEM) | 0.14 | 0.11 |
| Anaemia | 2.08 | 7.67 |
| Pneumonia | 5.22 | 6.13 |
| Bronchial Asthma | 1.12 | 0.83 |
| Sickle Disease | - | 0.34 |
| Neuroses | 0.28 | 0.23 |
| Respiratory Disease | 14.23 | 1.33 |
| Malaria- Severe, Complicated (combined) | - | 19.38 |
| Ear Infections | 1.10 | 0.01 |
| Psychoses | - | 0.08 |
| Epilepsy | 0.65 | 2.16 |

Source: MoHSW 2014

# 2. COUNTRY HEALTH SYSTEM

Tanzanian's health system is a combination of public and private financing and provision of health services. The major providers include the public, private not for profit, private health practitioners, traditional and complementary medical practitioners and the informal sector. This section highlights the main actors in the system, the roles and responsibilities they fulfil in the overall governance and management structures. The section provides a summary of health-related aspects of macroeconomic policies and national development policies.

## 2.1 Governance of the health system

The overall objective of the health sector is to reduce morbidity and mortality from the major causes of ill health and the disparities therein. The development of a 10-year Primary Health Care Development Plan and five-year Health Sector Strategic Plan (HSSP) brought in "fundamental" changes in the health sector planning and development. A minimum package of services comprising the most cost-effective interventions that address the major causes of burden of disease was articulated. The package known as Tanzania Minimum Health Care Package was intended to be the cardinal reference in determining the allocation of public funds and essential inputs. The package includes the Control of communicable Diseases such as malaria, HIV/AIDS and Tuberculosis, the Integrated Management of Childhood illnesses, Sexual and Reproductive Health and Rights, Public Health Interventions like Immunization, School Health, Health Education and Promotion and Environmental Health.

The sector articulated a sustainable broad-based national Health Financing Strategy geared towardsefficient, effective and equitable allocation and utilization of resources in the Health Sector. The Government together with development partners has in place a strong donor coordination mechanism that was implemented through sector wide approach (SWAP) for health. The Ministry initiated a process of carrying out technical support supervision to the Regional referal hospitals, Districts and Technical supervision in areas of super specialization. The whole structure of health service delivery in the country – from Dispensary level up to the National level fits well with the local government administrative structure which has the responsibility of implementation of government programmes.

## 2.2 Health service provision

This subsection describes the provision of personal and non-personal health services at different levels; patient flows, including the constituencies involved in service provision; facilities; and how different services are delivered (public health services, curative care, long-term care, rehabilitative services).

## 2.3 Public sector provision

The health system and especially the Governments referral system assumes a pyramidal pattern of a referral system recommended by health planners, that is from dispensary to treatment abroad. In order for us to understand the staff requirements, it is vital to discuss the levels of health care delivery where qualified staffs are required. The inventory identified seven levels of health care delivery in Tanzania. These determine the level of infrastructure at the respective levels and Human Resource requirements. Table 2.1gives a summary of these levels.

Table 2.1 Levels of health service delivery

| Infrastructure level | Administrative level | Target population | Services provided |
|---|---|---|---|
| Village Health Service | Community | <5,000 | Community-based preventive and promotive health services. |
| Dispensary Services | Village | 6,000 to 10,000 | Preventive, promotive and outpatient curative health services, outreach care. |
| Health Centre Services | Ward | 50,000 | Preventive, promotive, outpatient, curative, maternity,inpatient services emergency surgery and blood transfusion and laboratory services |
| District Hospitals | District | 500,000 | In addition to the services offered at HC other general services are provided. It also provides inservice training, consultation and research to community based health care programmes. |
| Regional Referal Hospitals | Region | >1,000,000 | In addition to services offered at the District hospital, Region has Specialists in various fields . Such services include; psychiatry, ear, nose and throat (ENT), ophthalmology, dentistry, intensive care, Gyn&Obs,radiology, pathology, higher level surgical and medical services. |
| Zone,Specialised, Consultant and National Hospitals | Zone and National | | These provide comprehensive specialist services. In addition, they are involved in teaching and research. |
| Treatment Abroad | | | For services not available in Tanzania, patients are referred abroad on government subsidy. The government is actively developing capacity for such services in Tanzania including open heart surgery and renal dialysis. |

Source: MoHSW 2014

## 2.4 Health facilities by level and ownership

The country has 6,878 health facilities covering all the districts and regions for all government of Tanzania Mainland, Faith Based Organisation and Private health practitioners. Details of the level of facility and ownership are indicated in Table 2.2 below.

Table 2.2 level of facility and ownership

| Facility Level | 2012 | | | 2013 | | |
|---|---|---|---|---|---|---|
| | Private | Government | Total | Private | Government | Total |
| Dispensary | 1,358 | 4,322 | 5,680 | 1,444 | 4,469 | 5,913 |
| Health Centre | 244 | 498 | 742 | 222 | 489 | 711 |
| Hospital | 129 | 112 | 241 | 140 | 114 | 254 |
| **Total** | **1,731** | **2,932** | **6,663** | **1,806** | **5,072** | **6,878** |

Source: MoHSW Budget Speech 2014

## 2.5 Private not-for-profit sub sector provision

The majority of the private not-for-profit (PNFP) units are coordinated by the two medical bureaus namely, the Christian Social Servies Commission (CSSC), Tanzania Muslim Bureau, in swahili translation is known as Baraza la Kiislamu Tanzania (BAKWATA). These form umbrella organizations that supervise the governance of the health system in the Christian and Muslim private Not for-Profit sub-sector. The private for profit organisation are coordinated and supervised by Association of Private Health Facilities of Tanzania (APHFTA). They link up with their lower coordination structures and health facilities. The PNFP and PFP sector employs an estimated 15,617. It is estimated (HRHSW Staffing Levels 2014-2019) that the total requirement needed to enhance the PNFPand PFP services is 57,503. There was a pay increases in the public service with intended recruitment during the FY 2007/08.

This decision caused unrest in management and staff of the PNFP who saw an inevitable massive loss of staff from PNFP to GoT supported health facilities. Various studies indicate that the PNFP have very high staff mobility and this is largely attributable to low wages and unfavourable working environment. In order to enhance Public-Private Partnership, So far the PNFP have demonstrated important achievements following the introduction of subsidies by government. Within their means and with all the support available from donations, the government has included the private not for profit organisations which are in service agreement or designated by the government into the government payroll. The PNFP have tried to refocus their activities in line with their original mission of existence, that of being of service to the poor in line with the government policy of abolishing or minimizing economic barriers to the use of health services. Ndanda and Peramiho hospitals are such hospitals situated deep in rural area serving the rural poor.

Table 2.3 HRHSW by ownership

| Sn | Cadre | FBO | Private | Public | Grand Total |
|---|---|---|---|---|---|
| 1 | Assistant Dental Officer | 21 | 1 | 155 | 177 |
| 2 | Assistant Environmental Health Officer | 35 | 4 | 1,122 | 1,161 |
| 3 | Assistant Medical Officer | 244 | 20 | 1,473 | 1,737 |
| 4 | Assistant Nursing Officer | 1,231 | 55 | 4,615 | 5,901 |
| 5 | Audiometrists | - | - | 4 | 4 |
| 6 | Chemist/Chemist Assistants | 1 | | 9 | 10 |
| 7 | Clinical Assistant | 85 | 46 | 1,085 | 1,216 |
| 8 | Clinical Officer | 646 | 128 | 5,390 | 6,164 |
| 9 | Conversion Designation | 1 | - | 94 | 95 |
| 10 | Cook/Chef/Catering Officers | 210 | 5 | 318 | 533 |
| 11 | Dental Surgeon | 5 | - | 126 | 131 |
| 12 | Environmental Health Assistant | 33 | 2 | 504 | 539 |
| 13 | Environmental Health Officer | 3 | 1 | 479 | 483 |
| 14 | Health Laboratory Technologistic Assistant | 339 | 135 | 981 | 1455 |
| 15 | Health Laboratory Scientist | 11 | 1 | 101 | 113 |
| 16 | Health Laboratory Technologists | 545 | 42 | 1425 | 2012 |
| 17 | Health Medical Recorders | 122 | 4 | 373 | 499 |
| 18 | Health Secretary | 48 | 1 | 344 | 393 |
| 19 | ICT Professional Staff | 45 | 3 | 46 | 94 |
| 20 | Laundry Staff | 91 | 5 | 125 | 221 |
| 21 | Medical Attendant | 4,545 | 539 | 15,538 | 20,622 |
| 22 | Medical Officers | 236 | 34 | 1,439 | 1,709 |
| 23 | Nurses | 2,647 | 364 | 12,069 | 15,080 |
| 24 | Nursing Officer | 316 | 21 | 1,624 | 1,961 |
| 25 | Nutrition Officer | 4 | - | 56 | 60 |
| 26 | Optometric Technologist | 9 | - | 77 | 86 |
| 27 | Optometrist | 8 | - | 14 | 22 |
| 28 | Orthotist/Prosthetist | 1 | - | 2 | 3 |
| 29 | Other Non-Medical Professionals | 944 | 48 | 1,077 | 2,069 |
| 30 | Pharmaceutical Technologist | 57 | 3 | 249 | 309 |
| 31 | Pharmacist | 42 | 1 | 312 | 355 |
| 32 | Physiotherapist | 47 | 1 | 135 | 183 |
| 33 | Physiotherapist Assistant | 2 | - | 11 | 13 |
| 34 | Prothetist/Orthotist | 1 | - | 7 | 8 |
| 35 | Radiotherapist | 5 | - | 20 | 25 |
| 36 | Researchers | 2 | - | 19 | 21 |
| 37 | Speech Therapist | - | - | 2 | 2 |
| 38 | Support Staff | 1,224 | 54 | 1,912 | 3,190 |
| 39 | Tutor/Lecturer/Professor | 24 | 13 | 191 | 228 |
| 40 | Biomedical Technicians & Engineers | 13 | - | 11 | 24 |
| 41 | Social welfare Staff | 41 | - | 316 | 357 |
| 42 | Radiography staff | 27 | - | 80 | 107 |

Table 2.3 Continues

| Sn | Cadre | FBO | Private | Public | Grand Total |
|---|---|---|---|---|---|
| 43 | Radiologists | 19 | 6 | 81 | 106 |
| 44 | Occupational Therapist Staff | 14 | - | 24 | 38 |
| 45 | Medical Specialist/Consultants | 93 | 9 | 383 | 485 |
| 46 | Dental Therapist | 33 | 1 | 209 | 243 |
| | **Grand Total** | **14,070** | **1,547** | **54,627** | **70,244** |

Source: MoHSW 2014

## 2.6 Health care financing

This subsection describes the sources of funds; how the funds are allocated (to regions, facilities, sectors); how the funds flow; how services are paid for; the levels of health expenditure; and main areas of expenditure. The section further considers access to and use of services: the distribution of health costs and benefits, coverage of services, health service utilization patterns and affecting factors are summarized in this subsection.

## 2.7 Public expenditure

The overall public expenditure on health includes Government of Tanzania (GoT) budgetary spending, donor funding and minimum contributions from the Local Governments. The total GoT budget on health has been increasing since the FY 2010/11 where by the allocation was TZS 1,206bn, equivalent to 12% of the Total GDP. This was followed by a fall in the total budgetary allocation to the sector, from 12% in the FY 2010/11 to 10% in FY 2011/12 and again 10% in the FY 2012/13. While more money and drugs are being mobilized, human resources for health, remains underfunded. This is contributed by the underfunding of the health sector. The Abuja declaration recommends allocation of 15% of national budget to health sector. The health sector financing is considerably improving although it is still below the Abuja declaration targets in Table 2.4 shows the budgetary trends over the year for GoT.

Table 2.4 Total Health Expenditure as a percent of national government budget

| Year | Budget (Billions) | Total Health Expenditure as % of national government budget |
|---|---|---|
| 2012/2013 | 1,288.8 | 10% |
| 2011/2012 | 1,209.1 | 10% |
| 2010/2011 | 1,206 | 12% |

Source: MoHSW 2014

# 3. HEALTH WORKERS SITUATION

Demographic, epidemiological, technological, economic and political changes have created huge human resource challenges in many constrained developing health systems. The situation has been worsened by the spread of the deadly HIV/AIDS pandemic that has had an immense impact on health systems capacity particularly in sub-Saharan Africa. The depletion rate of health workers due to HIV/AIDS related deaths is much higher than the replacement rate, leaving most health systems incapacitated in many ways. Internal and external migration of health workers and inadeaquate production capacity of health workers is a large global challenge that seems to be affecting many developing countries. In Tanzania, the situation is not very different. These challenges are apparent in the country as highlighted in the subsequent subsections.

## 3.1 Main challenges and achievements

There is first of all a heavy urban/rural imbalance, while extremely heavy bias toward the central region is also evident; while only hosting 15.2% of the population (2012 National Population Census), we only have 22,942 of all Nurses and Midwifery Professional cadres (degree holders and Middle level cadres) required in the Heaslth Sector, 1,709 of all medical doctors required, 131 of all Dental Surgeon and 355 of all Pharmacists. The imbalances are even more pronounced at district level: there are more than 20,622 untrained medical attendants at all levels of health care services and no single medical specialists in Geita and Katavi regional referal hospitals. Highly trained HRHSW including medical doctors, degree and specialized nurses/midwives, pharmacists, dentists as well as diagnostic personnel are extremely unequally distributed, serving only a fraction of the population. The great majority of Tanzanians therefore rely on associate health professionals for clinical, nursing, midwifery, diagnostic, therapeutic, rehabilitation, preventive and promotional services.

Compared to other sub-Saharan African countries the analysis reveals that support staff clinical workers (including medical attendants) working in the health sector form approximately one third of the whole workforce (excluding traditional and faith healers). These health workers are not appropriately trained but a large proportion of the population exclusively depend on them particularly in the rural areas of the country.

Approximately a total of 399 of dentists, pharmacist, medical doctors, nurses and midwives recorded to be self employed. Too little is known about staff dynamics and attrition, but many regard it as disturbingly high; for example, the government funded posts reports indicate that only 28.6% of all medical doctors graduating( approxim. 700 MDs) are employed and the rest are not known where are they or migrate abroad. Attrition among health workers and low productivity are attributed to poor and delayed payments in the public sector, lack of promotion, training opportunity and

career progression especially under Local Government, poor leadership with harassment and lack of transparency, lack of decent accommodation and poor working conditions, health workers going for training and deaths due to HIV/AIDS, accidents and other incidencies. The single spine structure as well as professional protectionism contributes to lack of flexibility of the HRHSW system to adequately respond to the challenging and rapidly changing service needs.

### 3.2 Analysis of HRHSW data

Since 2009, MoHSW introduced HRHSWIS and TIIS all over the country, the roll out was done financed by JICA-Human Resources for Health Development Project. The objective of these systems was to collect, record and analyze the HRHSW data in a complete, reliable and accurate way. The analysis of the HRHSW data generated from both two systems have been started three years ago. Results of this analysis for the year 2013/2014 are discussed in this section. Table 3.1 shows numbers of workforces either a health occupation or a nonhealth occupation but within the health sector:

Table 3.1 Health worker force population ratios at Regional level

| Sn | Region | HRHSW Available | Estimated Population 2014 | HRHSW Per 10,000 Population |
|---|---|---|---|---|
| 1 | Arusha Region | 3,208 | 1,829,043 | 17.5 |
| 2 | Dar es Salaam Region | 10,075 | 4,747,962 | 21.2 |
| 3 | Dodoma Region | 2,905 | 2,176,274 | 13.3 |
| 4 | Geita Region | 1,202 | 1,831,161 | 6.6 |
| 5 | Iringa Region | 2,062 | 971,599 | 21.2 |
| 6 | Kagera Region | 3,095 | 2,612,783 | 11.8 |
| 7 | Katavi Region | 348 | 604,818 | 5.8 |
| 8 | Kigoma Region | 1,724 | 2,337,114 | 7.4 |
| 9 | Kilimanjaro Region | 5,911 | 1,692,990 | 34.9 |
| 10 | Lindi Region | 1,692 | 889,032 | 19.0 |
| 11 | Manyara Region | 2,385 | 1,538,459 | 15.5 |
| 12 | Mara Region | 2,227 | 1,835,688 | 12.1 |
| 13 | Mbeya Region | 5,691 | 2,838,925 | 20.0 |
| 14 | Morogoro Region | 3,915 | 2,326,257 | 16.8 |
| 15 | Mtwara Region | 1,768 | 1,301,537 | 13.6 |
| 16 | Mwanza Region | 4,119 | 2,941,355 | 14.0 |
| 17 | Njombe Region | 1,864 | 713,375 | 26.1 |
| 18 | Pwani Region | 2,397 | 1,147,541 | 20.9 |
| 19 | Rukwa Region | 1,271 | 1,069,858 | 11.9 |
| 20 | Ruvuma Region | 2,411 | 1,435,328 | 16.8 |
| 21 | Shinyanga Region | 1,852 | 1,599,947 | 11.6 |
| 22 | Simiyu Region | 1,052 | 1,641,700 | 6.4 |
| 23 | Singida Region | 1,959 | 1,434,411 | 13.7 |
| 24 | Tabora Region | 1,635 | 2,426,464 | 6.7 |
| 25 | Tanga Region | 3,476 | 2,136,184 | 16.3 |
| | **Grand Total** | **70,244** | **46,079,805** | **15.2** |

Source: MoHSW 2014

Table 3.2 Gender distribution by health occupation

| Sn | Cadre | Female | Male | Grand Total | Female % |
|---|---|---|---|---|---|
| 1 | Assistant Dental Officer | 50 | 127 | 177 | 28 |
| 2 | Assistant Environmental Health Officer | 373 | 788 | 1,161 | 32 |
| 3 | Assistant Medical Officer | 531 | 1,206 | 1,737 | 31 |
| 4 | Assistant Nursing Officer | 4,882 | 1,019 | 5,901 | 83 |
| 5 | Audiometrists | 2 | 2 | 4 | 50 |
| 6 | Chemist/Chemist Assistants | 1 | 9 | 10 | 10 |
| 7 | Clinical Assistant | 396 | 820 | 1,216 | 33 |
| 8 | Clinical Officer | 2,228 | 3,936 | 6,164 | 36 |
| 9 | Conversion Designation | 37 | 58 | 95 | 39 |
| 10 | Cook/Chef/Catering Officers | 295 | 238 | 533 | 55 |
| 11 | Dental Surgeon | 33 | 98 | 131 | 25 |
| 12 | Environmental Health Assistant | 252 | 287 | 539 | 47 |
| 13 | Environmental Health Officer | 140 | 343 | 483 | 29 |
| 14 | Health Laboratory Assistant | 90 | 94 | 184 | 80 |
| 15 | Health Laboratory Scientist | 38 | 75 | 113 | 34 |
| 16 | Health Laboratory Technologists | 685 | 1327 | 2012 | 69 |
| 17 | Health Medical Recorders | 330 | 169 | 499 | 66 |
| 18 | Health Secretary | 177 | 216 | 393 | 45 |
| 19 | ICT Professional Staff | 28 | 66 | 94 | 30 |
| 20 | Laundry Staff | 94 | 127 | 221 | 43 |
| 21 | Medical Attendant | 16,794 | 3,828 | 20,622 | 81 |
| 22 | Medical Doctors | 509 | 1,200 | 1,709 | 30 |
| 23 | Nurses | 13,303 | 1,777 | 15,080 | 88 |
| 24 | Nursing Officer | 1,591 | 370 | 1,961 | 81 |
| 25 | Nutrition Officer | 46 | 14 | 60 | 77 |
| 26 | Optometric Technologist | 24 | 62 | 86 | 28 |
| 27 | Optometrist | 10 | 12 | 22 | 45 |
| 28 | Orthotist/Prosthetist | - | 3 | 3 | 0 |
| 29 | Other Non-Medical Professionals | 1,009 | 1,060 | 2,069 | 49 |
| 30 | Pharmaceutical Technologist | 123 | 186 | 309 | 40 |
| 31 | Pharmacist | 109 | 246 | 355 | 31 |
| 32 | Physiotherapist | 71 | 112 | 183 | 39 |
| 33 | Physiotherapist Assistant | 3 | 10 | 13 | 23 |
| 34 | Prothetist/Orthotist | 4 | 4 | 8 | 50 |
| 35 | Radiotherapist | 3 | 22 | 25 | 12 |
| 36 | Researchers | 5 | 16 | 21 | 24 |
| 37 | Speech Therapist | 1 | 1 | 2 | 50 |
| 38 | Support Staff | 1,155 | 2,035 | 3,190 | 36 |
| 39 | Tutor/Lecturer/Professor | 77 | 151 | 228 | 34 |
| 40 | Biomedical Technicians & Engineers | 6 | 18 | 24 | 25 |
| 41 | Social welfare Staff | 208 | 149 | 357 | 58 |
| 42 | Radiography staff | 26 | 81 | 107 | 24 |

Table 3.2 Continues

| Sn | Cadre | Female | Male | Grand Total | Female % |
|---|---|---|---|---|---|
| 43 | Radiologists | 16 | 90 | 106 | 15 |
| 44 | Occupational Therapist Staff | 21 | 17 | 38 | 55 |
| 45 | Medical Specialist/Consultants | 155 | 330 | 485 | 61 |
| 46 | Dental Therapist | 88 | 155 | 243 | 36 |
| | **Grand Total** | **46,668** | **23,576** | **70,244** | **66** |

Source: MoHSW 2014

Compared to other sub-Saharan African countries the ratios in the above table compare relatively well. The table however reveals that support staff clinical workers (including medical attendants) working in the health sector form approximately one third of the whole workforce (excluding traditional and faith healers). These health workers are not appropriately trained but a large proportion of the population exclusively depend on them particularly in the rural areas of the country.

### 3.3 Gender considerations

Most health care workers in the Health Sector in Tanzania are women (Table 3.2). The time this analysis was done, for instance, of the 70,244 health care workers in the sector, women represent nearly 66% of all personnel in the health system. This preponderance is the result of the significant weight of the nurse categories, which are traditionally women-oriented occupations in Tanzania. The feminization of the health workforce implies challenges in terms of managing human resources, especially reconciling the maternity constraints and administrative provisions such as family reunification with the requirements of providing services. Measures such as task shifting and the use of temporary personnel should be carefully explored in an attempt to overcome this constraint. Table 3.2 shows the gender situation.

For other health care worker categories, however, men are in the majority. As depicted in Table 3.2, Health Sector has 509 women medical doctors versus 1,200 men (70% men), Medical Specilaists 151 women(32%) versus 320 men(68%). In other categories such as clinical officers, physiotherapists, dentist and dental technologists, public health officers, Technologists and radiographers, men represent more than 60% of each specific workforce.

### 3.4 Age distribution by health occupation

The age distribution of the workforce is very important for any organization and even more so in the health sector. Since attaining skills is an expensive undertaking that takes a while in the health sector. The average age of the various types of health workers varies substantially, and this appears to reflect retention and recruitment patterns. Analysis was done of the age distribution of the different health workers by occupation. Results of this analysis are presented in Table 3.3. The retirement age for Tanzanian civil servants is 60 years, but still employees can cease their employment at the age of 55. The analysis shows that most staff are below 50 years of age.

Table 3.3 Health workers by age group

| Sn | Row Labels | < 20 yrs | 20 - 24 | 25 - 29 | 30 - 34 | 35 - 39 | 40 - 44 | 45 - 49 | 50 - 54 | 55 - 59 | Grand Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Assistant Dental Officer | 1 | 1 | 3 | 20 | 41 | 35 | 33 | 28 | 15 | 177 |
| 2 | Assistant Environmental Health Officer | 1 | 5 | 108 | 109 | 124 | 208 | 280 | 244 | 82 | 1,161 |
| 3 | Assistant Medical Officer | 2 | 1 | 6 | 24 | 186 | 297 | 419 | 417 | 385 | 1,737 |
| 4 | Assistant Nursing Officer | 13 | 91 | 908 | 1,006 | 1,258 | 792 | - | 601 | 559 | 5,901 |
| 5 | Audiometrists | - | - | - | - | 2 | 1 | - | - | - | 4 |
| 6 | Chemist/Chemist Assistants | - | 1 | 5 | 1 | 1 | - | 1 | 1 | - | 10 |
| 7 | Clinical Assistant | 8 | 106 | 422 | 135 | 67 | 79 | 95 | 145 | 159 | 1,216 |
| 8 | Clinical Officer | 5 | 20 | 647 | 880 | 929 | 990 | 1,028 | 975 | 90 | 6,164 |
| 9 | Conversion Designation | - | 2 | 5 | 24 | 19 | 19 | 12 | 7 | 7 | 95 |
| 10 | Cook/Chef/Catering Officers | - | 6 | 31 | 57 | 64 | 65 | 102 | 110 | 98 | 533 |
| 11 | Dental Surgeon | - | - | 7 | 62 | 35 | 9 | 4 | 7 | 7 | 131 |
| 12 | Environmental Health Assistant | - | 1 | 17 | 17 | 47 | 95 | 127 | 161 | 74 | 539 |
| 13 | Environmental Health Officer | - | - | 50 | 75 | 45 | 86 | 113 | 75 | 39 | 483 |
| 14 | Health Laboratory Assistant | 5 | 65 | 298 | 309 | 334 | 159 | 139 | 83 | 63 | 1455 |
| 15 | Health Laboratory Scientist | - | 3 | 16 | 19 | 13 | 17 | 9 | 16 | 20 | 113 |
| 16 | Health Laboratory Technologists | 3 | 23 | 119 | 188 | 234 | 139 | 109 | 61 | 47 | 923 |
| 17 | Health Medical Recorders | - | 18 | 73 | 115 | 102 | 43 | 52 | 53 | 43 | 499 |
| 18 | Health Secretary | - | 7 | 119 | 92 | 64 | 43 | 29 | 23 | 16 | 393 |
| 19 | ICT Professional Staff | - | 2 | 25 | 34 | 22 | 7 | 2 | 1 | 1 | 94 |
| 20 | Laundry Staff | - | 1 | 14 | 15 | 24 | 36 | 55 | 47 | 29 | 221 |
| 21 | Medical Attendant | 16 | 594 | 1,710 | 1,927 | 2,705 | 3,085 | 4,206 | 3,728 | 2,651 | 20,622 |
| 22 | Medical Officers | 6 | - | 214 | 664 | 404 | 166 | 79 | 81 | 95 | 1,709 |
| 23 | Nurses | 26 | 680 | 2,105 | 1,846 | 2,495 | 2,009 | 2,237 | 2,019 | 1,663 | 15,080 |
| 24 | Nursing Officer | 1 | 6 | 97 | 267 | 465 | 282 | 288 | 287 | 268 | 1,961 |
| 25 | Nutrition Officer | - | - | 16 | 15 | 11 | 9 | 4 | 4 | 1 | 60 |
| 26 | Optometric Technologist | - | - | 15 | 16 | 19 | 11 | 6 | 15 | 4 | 86 |
| 27 | Optometrist | - | - | 4 | 5 | 4 | 2 | 3 | 3 | 1 | 22 |
| 28 | Orthotist/Prosthetist | - | - | 1 | - | - | 2 | - | - | - | 3 |
| 29 | Other Non-Medical Professionals | 6 | 35 | 243 | 340 | 341 | 327 | 314 | 269 | 194 | 2,069 |
| 30 | Pharmaceutical Technologist | - | 3 | 48 | 59 | 62 | 55 | 35 | 26 | 21 | 309 |

Table 3.3 Continues

| Sn | Row Labels | < 20 yrs | 20 - 24 | 25 - 29 | 30 - 34 | 35 - 39 | 40 - 44 | 45 - 49 | 50 - 54 | 55 - 59 | Grand Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 31 | Pharmacist | 3 | 1 | 52 | 106 | 68 | 49 | 31 | 19 | 26 | 355 |
| 32 | Physiotherapist | - | 2 | 48 | 39 | 33 | 20 | 19 | 18 | 4 | 183 |
| 33 | Physiotherapist Assistant | - | - | 3 | 1 | 2 | 3 | 3 | 1 | - | 13 |
| 34 | Prothetist/Orthotist | - | 1 | - | 3 | - | - | - | 3 | 1 | 8 |
| 35 | Radiotherapist | - | - | 7 | 3 | 5 | 5 | 1 | 2 | 2 | 25 |
| 36 | Researchers | - | 1 | 4 | 2 | 5 | 3 | 3 | 2 | 1 | 21 |
| 37 | Speech Therapist | - | - | - | - | 1 | 1 | - | - | - | 2 |
| 38 | Support Staff | 3 | 35 | 173 | 331 | 451 | 510 | 597 | 582 | 508 | 3,190 |
| 39 | Tutor/Lecturer/Professor | | | 6 | 27 | 46 | 42 | 31 | 29 | 47 | 228 |
| 40 | Biomedical Technicians & Engineers | - | - | - | - | 7 | 4 | 6 | 3 | 4 | 24 |
| 41 | Social welfare Staff | 1 | | 43 | 76 | 54 | 36 | 38 | 59 | 50 | 357 |
| 42 | Radiography staff | 4 | 25 | 121 | 187 | 203 | 206 | 174 | 160 | 116 | 1196 |
| 43 | Radiologists | - | - | 7 | 22 | 13 | 25 | 15 | 10 | 14 | 106 |
| 44 | Occupational Therapist Staff | - | 4 | 5 | 9 | 7 | 5 | 5 | 2 | 1 | 38 |
| 45 | Medical Specialist/Consultants | 1 | 1 | 8 | 33 | 117 | 116 | 62 | 71 | 76 | 485 |
| 46 | Dental Therapist | - | 2 | 64 | 70 | 52 | 27 | 12 | 13 | 3 | 243 |
| 47 | Technicians &Technologists | 4 | 24 | 102 | 172 | 182 | 180 | 163 | 153 | 109 | 1,089 |
| | **Grand Total** | **105** | **1,743** | **7,867** | **9,230** | **11,181** | **10,120** | **11,452** | **10,461** | **8,085** | **70,244** |

Source: MoHSW (HRHSWIS) 2014

The age distribution above shows also that, there are further large numbers of young medical attendants who will either stay in the system for many years to come.

### 3.5 Geographical imbalances of Human Resources for Health

There is first of all a heavy urban/rural imbalance, for example, 74% of all medical doctors were found in urban environment, the doctor population ration being a factor 17 more favourable in urban than rural setting. Table 3.4 a/b shows distribution of health workers by region.

**Table 3.4a Regional distribution of health workers**

| Region / Cadre | Arusha | Dar Es Salaam | Dodoma | Geita | Iringa | Kagera | Katavi | Kigoma | Kilimanjaro | Lindi | Manyara | Mara | Mbeya | Morogoro |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Assistant Dental Officer | 12 | 16 | 8 | 2 | 7 | 6 | 1 | 3 | 16 | 5 | 4 | 6 | 12 | 15 |
| Assistant Environmental Health Officer | 43 | 88 | 63 | 35 | 25 | 56 | 15 | 44 | 58 | 35 | 34 | 41 | 80 | 80 |
| Assistant Medical Officer | 67 | 217 | 72 | 37 | 53 | 64 | 18 | 61 | 151 | 57 | 51 | 49 | 126 | 134 |
| Assistant Nursing Officer | 258 | 1,352 | 201 | 115 | 90 | 281 | 20 | 107 | 505 | 150 | 354 | 136 | 379 | 233 |
| Audiometrists | - | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| Chemist/ Chemist Assistants | 1 | 2 | 2 | 1 | 1 | - | - | - | - | - | - | - | - | 1 |
| Clinical Assistant | 35 | 48 | 50 | 44 | 51 | 31 | 9 | 52 | 60 | 28 | 41 | 55 | 124 | 68 |
| Clinical Officer | 326 | 653 | 298 | 134 | 241 | 203 | 31 | 124 | 488 | 166 | 176 | 201 | 384 | 529 |
| Conversion Designation | - | 49 | 2 | - | 1 | 3 | - | 1 | 11 | - | - | - | 18 | - |
| Cook/ Chef/ Catering officers | 11 | 61 | 28 | 3 | 9 | 12 | - | 16 | 90 | 10 | 26 | 20 | 47 | 24 |
| Dental Surgeon | 5 | 32 | 10 | - | 4 | 1 | - | 2 | 7 | 5 | 4 | - | 12 | 5 |
| Environmental | 23 | 22 | 39 | 15 | 12 | 33 | 5 | 14 | 34 | 18 | 11 | 28 | 41 | 41 |

Table 3.4a Continues

| Region / Cadre | Arusha | Dar Es Salaam | Dodoma | Geita | Iringa | Kagera | Katavi | Kigoma | Kilimanjaro | Lindi | Manyara | Mara | Mbeya | Morogoro |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Health Assistant | | | | | | | | | | | | | | |
| Environmental Health Officer | 27 | 139 | 18 | 10 | 18 | 17 | 1 | 5 | 32 | 7 | 4 | 13 | 19 | 34 |
| Health Laboratory Assistant | 82 | 108 | 67 | 56 | 42 | 54 | 4 | 44 | 81 | 26 | 77 | 66 | 115 | 117 |
| Health Laboratory Scientist | 1 | 67 | 6 | 1 | - | 2 | 1 | - | 9 | - | 1 | - | 3 | 5 |
| Health Laboratory Technologists | 59 | 148 | 43 | 17 | 64 | 24 | 3 | 13 | 67 | 23 | 13 | 28 | 100 | 38 |
| Health Medical Recorders | 38 | 136 | 13 | 8 | 11 | 16 | - | 6 | 56 | 8 | 16 | 11 | 21 | 25 |
| Health Secretary | 16 | 41 | 17 | 8 | 13 | 16 | 4 | 13 | 31 | 13 | 12 | 11 | 28 | 19 |
| ICT Professional Staff | 2 | 43 | 3 | - | 1 | 1 | - | 1 | 13 | - | 3 | - | - | 2 |
| Laundry Staff | 10 | 57 | 3 | - | 5 | 12 | - | 9 | 33 | 5 | 2 | 5 | 13 | 9 |
| Medical Attendant | 944 | 1,640 | 748 | 340 | 509 | 1,002 | 140 | 612 | 1,927 | 647 | 729 | 622 | 1,846 | 1,032 |
| Medical Officers | 82 | 541 | 98 | 15 | 51 | 31 | 7 | 13 | 100 | 27 | 37 | 33 | 200 | 75 |
| Nurses | 693 | 1,546 | 704 | 283 | 617 | 745 | 66 | 409 | 1,074 | 333 | 459 | 640 | 1,332 | 793 |

Table 3.4a Continues

| Region / Cadre | Arusha | Dar Es Salaam | Dodoma | Geita | Iringa | Kagera | Katavi | Kigoma | Kilimanjaro | Lindi | Manyara | Mara | Mbeya | Morogoro |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nursing Officer | 98 | 604 | 88 | 6 | 26 | 56 | 4 | 23 | 164 | 8 | 41 | 50 | 193 | 167 |
| Nutrition Officer | 3 | 15 | 3 | - | 4 | 2 | - | - | 4 | - | 2 | 2 | 9 | 1 |
| Optometric Technologist | 11 | 12 | 7 | 1 | 3 | 1 | | 3 | 5 | 2 | 3 | 4 | 11 | 1 |
| Optometrist | 3 | 11 | - | - | - | - | - | - | 6 | - | 2 | - | - | - |
| Orthotist/ Prosthetist | - | 3 | - | - | - | - | - | - | - | - | - | - | - | - |
| Other Non-Medical Professionals | 84 | 643 | 73 | 1 | 46 | 176 | 2 | 29 | 151 | 15 | 43 | 40 | 90 | 196 |
| Pharmaceutical Technologist | 13 | 63 | 6 | 14 | 9 | 13 | 1 | 9 | 30 | 8 | 11 | 18 | 15 | 8 |
| Pharmacist | 12 | 98 | 24 | 4 | 16 | 7 | 2 | 6 | 19 | 3 | 7 | 8 | 40 | 14 |
| Physiotherapist | 5 | 47 | 4 | 2 | 2 | 3 | - | 1 | 50 | 2 | 6 | 3 | 21 | 5 |
| Physiotherapist Assistant | - | - | - | 1 | 1 | 1 | - | 1 | - | - | - | - | 5 | 1 |
| Prothetist/ Orthotist | - | 1 | - | - | - | - | - | - | 7 | - | - | - | - | - |
| Radiotherapist | - | 12 | 1 | - | - | - | - | - | 1 | - | 1 | 1 | - | 2 |
| Researchers | - | 8 | 1 | - | - | - | - | - | 3 | 1 | 2 | - | - | - |
| Speech Therapist | - | 2 | - | - | - | - | - | - | - | - | - | - | - | - |
| Support Staff | 155 | 534 | 113 | 17 | 70 | 151 | 9 | 79 | 435 | 64 | 163 | 91 | 182 | 114 |

Table 3.4a Continues

| Region / Cadre | Arusha | Dar Es Salaam | Dodoma | Geita | Iringa | Kagera | Katavi | Kigoma | Kilimanjaro | Lindi | Manyara | Mara | Mbeya | Morogoro |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tutor/ Lecturer/ Professor | - | 191 | 18 | - | - | - | - | - | - | - | 2 | - | - | 15 |
| Biomedical Technicians & Engineers | - | 4 | - | - | - | 2 | - | - | 4 | 1 | - | - | 1 | 5 |
| Social welfare Staff | 15 | 131 | 11 | 3 | 11 | 9 | 1 | 3 | 28 | 5 | 5 | 8 | 21 | 11 |
| Radiography staff | 5 | 60 | 2 | - | 1 | - | - | 1 | 1 | - | 4 | - | - | 2 |
| Radiologists | 4 | 16 | 1 | 4 | 3 | 7 | | 3 | 4 | 4 | 1 | 7 | 21 | 4 |
| Occupational Therapist Staff | 3 | 17 | - | - | - | 1 | - | - | 8 | - | - | - | - | 1 |
| Medical Specialist/Consultants | 17 | 318 | 4 | - | 3 | 2 | - | 1 | 24 | 1 | 2 | 4 | 28 | 14 |
| Dental Assistants/ Technologists | 12 | 13 | 6 | 5 | 15 | 4 | 1 | 1 | 13 | 8 | 2 | 3 | 41 | 31 |
| Technicians &Technologists | 33 | 262 | 50 | 20 | 27 | 50 | 3 | 15 | 111 | 7 | 34 | 23 | 113 | 44 |
| **Sub Total** | **3,208** | **10,075** | **2,905** | **1,202** | **2,062** | **3,095** | **348** | **1,724** | **5,911** | **1,692** | **2,385** | **2,227** | **5,691** | **3,915** |

Source: MoHSW (TIIS) 2014

Table 3.4 b Regional distribution of health workers

| Region / Cadre | Mtwara | Mwanza | Njombe | Pwani | Rukwa | Ruvuma | Shinyanga | Simiyu | Singida | Tabora | Tanga | Grand Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Assistant Dental Officer | 6 | 12 | 5 | 7 | 2 | 5 | 3 | 3 | 3 | 5 | 13 | 177 |
| Assistant Environmental Health Officer | 29 | 98 | 25 | 61 | 22 | 33 | 31 | 27 | 23 | 47 | 68 | 1,161 |
| Assistant Medical Officer | 54 | 66 | 33 | 74 | 26 | 66 | 39 | 23 | 44 | 47 | 108 | 1,737 |
| Assistant Nursing Officer | 212 | 381 | 126 | 114 | 72 | 116 | 162 | 70 | 113 | 155 | 199 | 5,901 |
| Audiometrists | - | - | - | - | - | - | - | - | - | - | - | 4 |
| Chemist/ Chemist Assistants | - | 1 | - | - | - | - | - | - | 1 | - | - | 10 |
| Clinical Assistant | 29 | 72 | 52 | 31 | 33 | 66 | 53 | 53 | 24 | 45 | 62 | 1,216 |
| Clinical Officer | 157 | 280 | 108 | 406 | 102 | 181 | 162 | 104 | 125 | 139 | 446 | 6,164 |
| Conversion Designation | 2 | 3 | 2 | - | - | 1 | 1 | - | - | 1 | - | 95 |
| Cook/Chef/Catering Officers | 14 | 40 | 17 | 11 | 9 | 18 | 16 | - | 13 | 7 | 31 | 533 |
| Dental Surgeon | 2 | 4 | 5 | 5 | 2 | 3 | 2 | 3 | - | 1 | 17 | 131 |
| Environmental Health Assistant | 19 | 54 | 7 | 10 | 16 | 23 | 25 | 14 | 11 | 9 | 15 | 539 |
| Environmental Health Officer | 7 | 27 | 10 | 13 | 3 | 12 | 4 | 3 | 16 | 4 | 40 | 483 |
| Health Laboratory Assistant | 31 | 83 | 19 | 42 | 18 | 40 | 68 | 38 | 70 | 54 | 53 | 1455 |
| Health Laboratory Scientist | 3 | - | - | 3 | 1 | 1 | 2 | 2 | - | 3 | 2 | 113 |
| Health Laboratory Technician/ Technologists | 11 | 62 | 39 | 26 | 16 | 32 | 23 | 8 | 20 | 10 | 36 | 923 |
| Health Medical Recorders | 8 | 34 | 6 | 16 | 6 | 8 | 12 | 4 | 13 | 6 | 21 | 499 |
| Health Secretary | 16 | 21 | 16 | 14 | 5 | 13 | 10 | 3 | 13 | 14 | 26 | 393 |
| ICT Professional Staff | 3 | 16 | - | 3 | - | - | 2 | - | - | - | 1 | 94 |
| Laundry Staff | 6 | 6 | 7 | 6 | 1 | 5 | 4 | 4 | 7 | 4 | 8 | 221 |

Table 3.4 b Continues

| Region / Cadre | Mtwara | Mwanza | Njombe | Pwani | Rukwa | Ruvuma | Shinyanga | Simiyu | Singida | Tabora | Tanga | Grand Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Medical Attendant | 567 | 1,177 | 600 | 621 | 516 | 925 | 650 | 415 | 655 | 548 | 1,210 | 20,622 |
| Medical Officers | 42 | 117 | 22 | 59 | 25 | 25 | 15 | 11 | 14 | 11 | 58 | 1,709 |
| Nurses | 370 | 985 | 531 | 469 | 276 | 602 | 431 | 223 | 460 | 372 | 667 | 15,080 |
| Nursing Officer | 17 | 72 | 28 | 126 | 12 | 32 | 18 | 1 | 53 | 18 | 56 | 1,961 |
| Nutrition Officer | 1 | 1 | - | 1 | - | 5 | 1 | - | 3 | - | 3 | 60 |
| Optometric Technologist | 3 | 4 | 2 | - | 2 | 1 | 2 | 4 | 2 | 1 | 1 | 86 |
| Optometrist | - | - | - | - | - | - | - | - | - | - | - | 22 |
| Orthotist/ Prosthetist | - | - | - | - | - | - | - | - | - | - | - | 3 |
| Other Non-Medical Professionals | 33 | 139 | 40 | 65 | 13 | 40 | 24 | 2 | 48 | 19 | 57 | 2,069 |
| Pharmaceutical Technologist | 6 | 38 | 10 | 4 | 1 | 9 | 5 | 4 | 5 | 3 | 6 | 309 |
| Pharmacist | 4 | 20 | 9 | 18 | 4 | 6 | 7 | 4 | 4 | 1 | 18 | 355 |
| Physiotherapist | 2 | 8 | 5 | 1 | 2 | 2 | 3 | 1 | 2 | 1 | 5 | 183 |
| Physiotherapist Assistant | - | - | - | - | - | - | 2 | - | - | - | 1 | 13 |
| Prothetist/ Orthotist | - | - | - | - | - | - | - | - | - | - | - | 8 |
| Radiotherapist | 2 | 1 | - | 3 | - | | - | - | - | 1 | - | 25 |
| Researchers | - | 2 | - | 1 | - | 1 | - | - | - | - | 2 | 21 |
| Speech Therapist | - | - | - | | - | - | - | - | - | - | | 2 |
| Support Staff | 81 | 146 | 89 | 94 | 68 | 84 | 46 | 12 | 157 | 72 | 164 | 3,190 |
| Tutor/Lecturer/Professor | - | 1 | 1 | - | - | - | - | - | - | - | - | 228 |
| Biomedical Technicians & Engineers | - | 3 | - | 1 | - | - | - | - | 1 | 1 | 1 | 24 |
| Social welfare Staff | 7 | 11 | 3 | 13 | 2 | 13 | 8 | 4 | 14 | 5 | 15 | 357 |
| Radiography staff | 1 | 12 | 5 | 5 | | 2 | 2 | | 1 | 1 | 2 | 107 |
| Radiologists & Radiologic Technologists | 2 | 8 | 2 | 3 | 1 | 3 | 1 | 2 | 4 | 1 | - | 106 |
| Occupational Therapist Staff | - | 5 | 1 | 1 | 1 | - | - | - | - | - | - | 38 |

Table 3.4 b Continues

| Cadre \ Region | Mtwara | Mwanza | Njombe | Pwani | Rukwa | Ruvuma | Shinyanga | Simiyu | Singida | Tabora | Tanga | Grand Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Medical Specialist/Consultants | 2 | 26 | 1 | 15 | 1 | 9 | 1 | - | 3 | 2 | 7 | 485 |
| Dental Assistants/ Technologists | 2 | 5 | 16 | 20 | 3 | 8 | 3 | 1 | 4 | 2 | 24 | 243 |
| Technicians &Technologists | 17 | 78 | 22 | 35 | 10 | 21 | 14 | 9 | 33 | 25 | 33 | 1,089 |
| **Grand Total** | **1,768** | **4,119** | **1,864** | **2,397** | **1,271** | **2,411** | **1,852** | **1,052** | **1,959** | **1,635** | **3,476** | **70,244** |

**Source: MoHSW 2014**

The table above shows variation in distribution of health workers by region. There is extremely heavy bias toward the Bussiness Region like Dar es Salaam, Kilimanjaro and Mwanza which is evident. These regions employs third quarter of all nurses and midwifery professional cadres (degree holders and specialist registered nurses) medical doctors, dentists and pharmacists. The imbalance is also evident when health worker to population ratios are calculated for various cadres in each region as indicated in Table 3.4 above.

### 3.6 Health occupations distribution by Urban/Rural Settings

The Census analysis also revealed an urban/rural imbalance. Professionals such as those with degrees were predominantly in urban environment areas. For instance 74% of medical doctors were serving urban population, while the majority of associate professionals including clinical officers registered and enrolled nurses and midwives were found in rural areas as indicated in Table 3.5.

Table 3.5 Percentage of health workers found in urban/rural areas

| Sn | Cadre | Rural | Urban | Grand Total |
|---|---|---|---|---|
| 1 | Anaesthesiologiost | - | 14 | 14 |
| 2 | Assistant Dental Officer | 108 | 69 | 177 |
| 3 | Assistant Environmental Health Officer | 803 | 358 | 1,161 |
| 4 | Assistant Laboratory Technologist | 859 | 426 | 1,285 |
| 5 | Assistant Medical Officer | 1,044 | 693 | 1,737 |
| 6 | Assistant Nursing Officer | 2,809 | 3,092 | 5,901 |
| 7 | Audiometrists | - | 4 | 4 |
| 8 | Chemist/Chemist Assistants | 5 | 5 | 10 |
| 9 | Clinical Assistant | 1,020 | 196 | 1,216 |
| 10 | Clinical Officer | 4,351 | 1,813 | 6,164 |
| 11 | Conversion Designation | 3 | 92 | 95 |
| 12 | Cook/Chef/Catering Officers | 262 | 271 | 533 |
| 13 | Dental Surgeon | 37 | 94 | 131 |
| 14 | Environmental Health Assistant | 408 | 131 | 539 |
| 15 | Environmental Health Officer | 172 | 311 | 483 |
| 16 | Health Laboratory Assistant | 101 | 69 | 170 |
| 17 | Health Laboratory Scientist | 15 | 98 | 113 |
| 18 | Health Laboratory Technician/ Technologists | 384 | 539 | 923 |
| 19 | Health Medical Recorders | 202 | 297 | 499 |
| 20 | Health Secretary | 241 | 152 | 393 |
| 21 | ICT Professional Staff | 14 | 80 | 94 |
| 22 | Laundry Staff | 89 | 132 | 221 |
| 23 | Medical Attendant | 13,324 | 7,298 | 20,622 |
| 24 | Medical Doctors | 439 | 1,270 | 1,709 |
| 25 | Nurses | 9,065 | 6,015 | 15,080 |

Table 3.5 Continues

| Sn | Cadre | Rural | Urban | Grand Total |
|---|---|---|---|---|
| 26 | Nursing Officer | 723 | 1,238 | 1,961 |
| 27 | Nutrition Officer | 25 | 35 | 60 |
| 28 | Optometric Technologist | 28 | 58 | 86 |
| 29 | Optometrist | 2 | 20 | 22 |
| 30 | Orthotist/Prosthetist | - | 3 | 3 |
| 31 | Other Non-Medical Professionals | 890 | 1,179 | 2,069 |
| 32 | Pharmaceutical Technologist | 150 | 159 | 309 |
| 33 | Pharmacist | 113 | 242 | 355 |
| 34 | Physiotherapist | 40 | 143 | 183 |
| 35 | Physiotherapist Assistant | 5 | 8 | 13 |
| 36 | Prothetist/Orthotist | - | 8 | 8 |
| 37 | Radiotherapist | 7 | 18 | 25 |
| 38 | Researchers | 2 | 19 | 21 |
| 39 | Speech Therapist | - | 2 | 2 |
| 40 | Support Staff | 1,757 | 1,433 | 3,190 |
| 41 | Tutor/Lecturer/Professor | 18 | 210 | 228 |
| 42 | Biomedical Technicians & Engineers | 9 | 15 | 24 |
| 43 | Social welfare Staff | 117 | 240 | 357 |
| 44 | Radiography staff | 22 | 85 | 107 |
| 45 | Radiologists & Radiologic Technologists | 44 | 62 | 106 |
| 46 | Occupational Therapist Staff | 4 | 34 | 38 |
| 47 | Medical Specialist/Consultants | 47 | 424 | 471 |
| 48 | Dental Assistants/Technologists | 168 | 75 | 243 |
| 49 | Technicians &Technologists | 444 | 645 | 1,089 |
| | **Grand Total** | **40,370** | **29,874** | **70,244** |

Source: MoHSW 2014

# 4. HRHSW PRODUCTION

This section details the strategies, requirements, mechanisms and capacities for HRHSW production and maintenance. Broad categories for this section (a) pre-service issues, (b) in-service and continuing education (c) specialization and post basic professional training. There are 153 registered training institutions which offer various training programs for health and social welfare workers. The non-degree level program for health professionals fall under the Ministry of Health and Social Welfare and accredited by the National Council for Technical Education (NACTE) which is responsible for setting entry qualification and educational standards. The degree programs are under the Ministry of Education and Vocational Training and are regulated by the Tanzania Commission for Universities (TCU). The private sector has a growing number in the health sector; and the recent years witnessed an increase in number of private for profit health human resources training facilities. Table 4.1 the number of health training Institutions by ownership from 2007-2014.

Table 4.1 Number of health training institutions by ownership from 2007-2014

| Ownership | Timeframe | | |
|---|---|---|---|
| | 2007 | 2009 | 2014 |
| Government | 62 | 82 | 82 |
| Private -Not-for Profit (FBOs) | 3 | 3 | 17 |
| FBO | 61 | 49 | 54 |
| **TOTAL** | **126** | **134** | **153** |

Source: MoHSW (TIIS) 2014

## 4.1 Pre-service training

The function of pre-service training for health workers is charged with more than one institutions. According to the new Education Policy, the MoHSW is mandated to run the mid-level cadre programmes and supervise all the Public and Private training institutions regardless of professional inclination and ownership. The degree programmes are under Ministry of Education. The linkage between the two ministries is done through integrated support systems. There is an inter-ministerial co-ordination committee which is mandated to discuss and make recommendations to government concerning the quality of training in the health training institutions. The country has 153 Health Training Institutions, these includes for middle level cadres i.e Nursing training and Allied Health training and Universities as indicated in Table 4.2.

Table 4.2 Health Training Institutions by ownership

| Training Institutions | Public | Faith Based Organisation | Private | Total |
|---|---|---|---|---|
| Doctor of Medicine | 2 | 6 | 2 | 10 |
| Dentistry | 2 | 1 | 0 | 3 |
| Clinical Officers | 20 | 3 | 3 | 24 |
| Clinical Assistant | 6 | 0 | 3 | 6 |
| Pharmacy | 2 | 1 | 2 | 3 |
| Nursing and Midwifery | 31 | 35 | 7 | 68 |
| Paramedical Laboratory | 4 | 4 | 5 | 8 |
| Paramedical radiology | 0 | 1 | 0 | 1 |
| Paramedical OT/PT | 4 | 0 | 0 | 4 |
| Paramedical Optometry | 1 | 0 | 0 | 1 |
| Environmental and Public Health | 6 | 0 | 0 | 6 |
| Health Medical Record | 1 | 0 | 1 | 1 |
| Total | 79 | 51 | 23 | 153 |

Source: MoHSW (TIIS) 2014

Universities offer a wide range of courses including the health related ones. Each year the government of Tanzania sponsors a number of candidates in these institutions. Details of health training institutions and their outputs are set out in Table 4.3 and 4.4.

Table 4.3 Entrants and Graduate of Middle Level Cadres for Allied Health Sciences and Nursing Programmes

| Programe(Award) | Enrollment | | | | Output | | | |
|---|---|---|---|---|---|---|---|---|
| | 2010 | 2011 | 2012 | 2013 | 2010 | 2011 | 2012 | 2013 |
| Advanced Diploma in Clinical Medicine | 230 | 197 | 200 | 198 | 218 | 225 | 230 | 182 |
| Advanced Diploma in Clinical Dentistry | 12 | 10 | 11 | 9 | 13 | 9 | 12 | 10 |
| Advanced Diploma in Vector Control | 10 | 11 | 5 | 13 | 16 | 14 | 16 | 18 |
| Diploma in Clinical Medicine | 499 | 0 | 157 | 851 | 429 | 426 | 523 | 495 |
| Diploma In Clinical Dentistry | 51 | 72 | 47 | 55 | 48 | 54 | 48 | 51 |
| Diploma In Environmental Health Sciences | 228 | 44 | 43 | 85 | 120 | 166 | 161 | 229 |
| Diploma In Optometry | 13 | 16 | 11 | 14 | 11 | 13 | 13 | 13 |
| Diploma In Physiotherapy | 22 | 29 | 22 | 16 | 17 | 22 | 20 | 22 |
| Diploma In Dental Laboratory Technology | 5 | 4 | 5 | 5 | 3 | 4 | 5 | 4 |
| Diploma In Health Personel Education | 16 | 38 | 38 | 24 | 16 | 38 | 36 | 34 |
| Diploma In Diagnostic Radiography | 44 | 51 | 72 | 106 | 33 | 38 | 47 | 45 |
| Diploma In Medical Laboratory Sciences | 187 | 127 | 169 | 230 | 84 | 112 | 133 | 178 |
| Diploma In Pharmaceutical Sciences | 157 | 82 | 95 | 119 | 76 | 82 | 98 | 115 |
| Certificate in Health Records | 23 | 32 | 66 | 76 | 20 | 25 | 23 | 32 |
| Certificate in Medical Laboratory Sciences | 558 | 681 | 333 | 1940 | 240 | 332 | 422 | 260 |
| Certificate In Clinical Medicine | 361 | 248 | 94 | 1138 | 320 | 320 | 355 | 248 |
| Certificate in Pharmaceutical Sciences | 71 | 88 | 162 | 116 | 29 | 61 | 71 | 88 |
| Diploma in Nursing | 1098 | 1420 | 1490 | 1361 | 978 | 1891 | 1430 | 1331 |
| Certificate in Nursing | 2108 | 1736 | 1723 | 1938 | 1802 | 1491 | 2105 | 2082 |

Source: MoHSW (TIIS) 2014

Table 4.4 Entrants and Graduate of Degree Level Cadres for Nursing and Allied Health Sciences

| Training Program (Awards) | Enrolment | | | | Graduate | | | |
|---|---|---|---|---|---|---|---|---|
| | 2010/11 | 2011/12 | 2012/13 | 2013/14 | 2010/11 | 2011/12 | 2012/13 | 2013/14 |
| MD | 896 | 955 | 1003 | 1267 | 350 | 599 | 436 | 290 |
| DDS | 19 | 31 | 32 | 33 | 22 | 40 | 11 | 4 |
| BPHARM | 73 | 64 | 51 | 64 | 32 | 35 | 31 | 40 |
| BSC NURSING | 142 | 187 | 204 | 259 | 42 | 53 | 51 | 41 |
| ENVIRONMENTAL HEALTH SCIENCE | 33 | 29 | 10 | 7 | 22 | 18 | 30 | 31 |
| BMLS | 88 | 83 | 68 | 150 | 0 | 29 | 32 | 66 |
| RTT | 8 | 7 | 11 | 4 | 2 | 7 | 7 | 2 |
| PRO-ORTH | 10 | 19 | 17 | 15 | 7 | 8 | 13 | 11 |
| PHYSIOTHERAPY | 13 | 12 | 15 | 23 | 7 | 7 | 9 | 12 |
| **TOTAL** | **1282** | **1387** | **1411** | **1822** | **484** | **796** | **620** | **497** |

Source: MoHSW (TIIS) 2014

The mid-level cadres critical for PHC implementation such as clinical officers, public health nurses, environmental personnel, and so on are in short supply, while there is a push for higher level training for doctors and other clinical cadres.

The enrollment of some cadres is very minimal compared to other cadres training without consideration of an overall manpower target and plan or health facilities demands. This is largely due to lack of production projection plan in place, though since independance the production plan is now under development for ten years to come. Clinical Officers and nurses are cadres that enrolled most than other cadres like Health laboratory technologists and pharmaceutical technologists.

### 4.2 Post basic training (in-service training)

The issues to be covered in this section include existing policies & strategic documents on production, supply basic training requirements for each category of health professionals (duration, type of educational institutions); requirements for specialization and further training (duration, type of educational institutions). Others include binding arrangements linked to education; setting educational standards, regulation, accreditation; capacities for education; number and distribution of educational institutions and teaching cadres; evaluation and relevance of the training programs, etc.). On what basis are the graduates trained: training needs assessment plan, health system requirements, including continuing education requirements and possibilities of in-service training activities.

### 4.3 In-service training

In-service training is provided partly in a formal way, in institutions, as up-grading, post-graduate or conversion courses and issues are similar to those in pre-service training. In Tanzania however, inservice training has also an informal meaning of continuing professional development (CPD) comprising all workers in the health sector, rather than continuing medical education (CME) which usually refers to medical doctors keeping up with their clinical skills. The number of stakeholders involved in CPD is large and varied but a system's vision and coordinating or regulatory function are lacking. In-service training as a nationally orchestrated planned and monitored set of activities is unfeasible, in view of the fact that the health workforce consists of 70,244 individuals. The present CPD activities appear to be determined by "where the money is" without a prioritized intervention plan. Roles and responsibilities of individuals, employers, regulatory bodies and associations need to be defined. CPD should be integrated with a set of interventions and regulations to enhance performance in a context of change management. Issues to be tackled include Each employing authority to have Training Plan in place.

Table 4.5 Total Number of Social Welfare Candidates Admitted v/s Graduates in Various Programmes Between 2010/11 and 2012/2013 Academic Year

| S/N | Course | 2010/2011 | | 2011/2012 | | 2012/2013 | |
|---|---|---|---|---|---|---|---|
| | | Enrollment | Output | Enrollment | Output | Enrollment | Output |
| 1 | Certificate in social work | 279 | 234 | 237 | 213 | 250 | 214 |
| 2 | Ordinary Diploma in Social Work | 137 | 129 | 238 | 208 | 232 | 213 |
| 3 | Postgraduate Diploma in Social Work | 23 | 18 | 17 | 11 | 11 | 9 |
| 4 | Bachelor Degree in Social Work | 213 | 165 | 309 | 196 | 231 | 224 |
| | **TOTAL** | **652** | **546** | **801** | **628** | **724** | **660** |

Source: MoHSW (TIIS) 2014

Table 4.6 Funding of Postgraduate training 2005-2013

| Year | 2005/2006 | 2006/2007 | 2007/2008 | 2008/2009 | 2009/2010 | 2010/2011 | 2011/2012 | 2012/2013 |
|---|---|---|---|---|---|---|---|---|
| Number of Students | 46 | 132 | 146 | 170 | 265 | 302 | 153 | 110 |

In general, in the year of the study (2012/2013), 450 postgraduate students who are sponsored by Ministry 415 undergoing training in the Country while 35 abroad as outlined in the following table.

Table 4.7 Summary of Ministry sponsored Postgraduate Students 2012/13)

| SN | Institution/Country | Year 1 | Year 2 | Year 3 | Year 4 | Total |
|---|---|---|---|---|---|---|
| In the Country | | | | | | |
| 1. | Muhimbili(MUHAS) | 75 | 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** |
| Outside the Country | | | | | | |
| 9. | Kenya | - | 1 | 3 | - | 4 |

Table 4.7 Continues

| SN | Institution/Country | Year 1 | Year 2 | Year 3 | Year 4 | Total |
|---|---|---|---|---|---|---|
| 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 |
| 17. | China | 1 | - | - | - | 1 |
| | Sub Total | 6 | 6 | 19 | 4 | 35 |
| | **Grand Total** | **110** | **148** | **162** | **30** | **450** |

Source: MoHSW 2014

### 4.4 Selection of trainees

The Admissions into health training istitutions registered by NACTE are processed through Central Admission System (CAS), which can be lodged through the Internet. The process is interactive in such a way that the applicant can easily and conveniently follow the instructions given by the system in the course of lodging an application.

The NACTE in collaboration with has introduced this system respectively form FY 2014 for all applicants for Certificate and Ordinary Diploma trainings to apply for admission into Training Institutions in the Country. Entry qualification is Form four leaver with minimum pass of "D" in three basic science subject namely Biology, Chemistry, Physics. Mathematics/English are additional qualification.

### 4.5 Training curricula

Most of the health worker training curricula have been reviewed to address the current HRHSW trends. However some have not been reviewed for extended periods of time while other curricula are difficult to implement, showing great deal of overlap. There are also observed gaps between curricula and the work situation on the ground. Private for profit health training institutions are encouraged to operate under the Public Private Partnership for Health and are swiftly emerging. Private not-for-profit training institutions have traditionally played an important role in the overall health training effort. Accreditation of training courses remains the mandate of autonomous organaization such as NACTE, TCU and VETA. Currently according to NACTE report, there are 91 with registration award, 30 with provisional award and 5 are in preparatory stage.

# 5. HRHSW UTILIZATION

## 5.1 Vacancy rates by category

During the period of the Health Sector Strategic Plan, recruitment of health workers was re-instated. By May 2014, more than 11,221 funded posts have been granted for recruitment. A mid-term review for the implementation of the Health Sector Strategic Plan (HSSP) conducted last year 2013 by MOHSW and her development partners indicates that the current proportion of approved posts filled with health workers improved from 9,000 in 2012/2013 to 11,229 in 2013/2014. The level of increase was not matching with outputs from Training Institutions, as districts constructed more health units, which increased the denominator.

Infrastructure development under decentralized management went ahead of production of health workers. In addition, while budget provision for recruitment for the Regional Referral Hospitals and other leves was made, the funded posts for Nursing Graduates and MDs were very few, this affected majority of MDs who approximately 700 graduates each year, but only 200 funded posts have been granted for 3 consecatively years now.

Table 5.1 Percent of Recruited Health Workers Against Permitted Posts Since 2009/10 to 2013/2014

| Year | New Positins Granted by PO-PSM/ | Number of Graduates Posted by MoHSW | % |
|---|---|---|---|
| 2009/10 | 6,257 | 4,090 | 65 |
| 2010/11 | 7,471 | 5,704 | 76 |
| 2011/12 | 9,391 | 6,704 | 68 |
| 2012/13 | 8,602 | 5,702 | 67 |
| 2013/14 | 11,221 | 7,677 | 68 |

Source: MoHSW 2014

In view of the foregoing discussion in HRHSW Technicl Working group and National commitments declared in Global Health Workforce Alliance in Brazil 2013, the country is still experiencing shortage of trained workforce. For instance the country of 43 million people as per 2012 National census for Tanzania Mainland, has got 2,311 medical doctors working in the health system, and the current doctor to population ratio stands at 0.5. The most rare cadres in the country include; Pharmacists, Physiotherapists, Dental surgeons, Radiographers, radiologists, Health Laboratory technologists and Anaesthetists. Table 5.2-5.14 below, show vacancy rates by occupation. The following tables in this section will explain vacancy rate by occupation at different levels

Table 5.2 Vacancy rates at Dispensary Level

| Facility Level | Dispensary | | |
|---|---|---|---|
| Profession | Available | Required | Shortage |
| Assistant Dental Officer/Dental Therapist | 17 | - | - |
| Assistant Medical Officer | 116 | - | - |
| Assistant Nursing Officer | 433 | - | - |
| Allied Health Professionals: | 89 | 5,913 | 5,824 |
| Clinical Assistant | 837 | - | - |
| Clinical Officer | 2,798 | 5,913 | 3,115 |
| Environmental Health Staff | 463 | - | - |
| Assistant Health Laboratory Technologist | 408 | 5,913 | 5,505 |
| Health Laboratory Scientist | 4 | - | - |
| Health Laboratory Technologist | 95 | - | - |
| Manager | 7 | - | - |
| Medical attendant | 5,741 | 5,913 | 172 |
| Medical Doctor | 54 | - | - |
| Medical Specialists | 14 | - | - |
| Enrolled Nurse | 4,121 | 11,826 | 7,705 |
| Nursing Officer | 156 | - | - |
| Allied non-Health Professional: | 95 | 5,913 | 5,818 |
| Pharmacist | 10 | - | - |
| Support Staff | 162 | 11,826 | 11,664 |
| **Grand Total** | **15,620** | **53,217** | **39,803** |

Source: MoHSW 2014

Table 5.3 Vacancy rates at Health Centre Level

| Facility Level | Health Centre | | |
|---|---|---|---|
| Profession | Available | Required | Shortage |
| Assistant Medical Officer | 307 | 711 | 404 |
| Assistant Nursing Officer | 623 | 711 | 88 |
| Allied Health Professionals: | 167 | 1,422 | 1,346 |
| Clinical Assistant | 155 | - | - |
| Clinical Officer | 1,133 | 1,422 | 289 |
| Assistant Dental Officer/Dental Therapist | 90 | 711 | 621 |
| Environmental Health Staff | 293 | 711 | 418 |
| Health Laboratory Scientist | 2 | - | - |
| Health Laboratory Technologist | 132 | 711 | 579 |
| Manager | 10 | - | - |
| Medical attendant | 2,820 | 4,977 | 2,157 |
| Medical Doctor | 57 | 711 | 654 |
| Medical Specialists | 6 | - | - |
| Enrolled Nurse | 2,267 | 6,399 | 4,132 |
| Nursing Officer | 132 | - | - |
| Allied non-Health Professional: | 55 | 1,422 | 1,367 |

Table 5.3 Continues

| Facility Level | Health Centre | | |
|---|---|---|---|
| Profession | Available | Required | Shortage |
| Pharmacist | 14 | - | - |
| Support Staff: | 335 | 2,133 | 1,798 |
| Assistant Health Laboratory Technologist | 383 | 711 | 371 |
| **Grand Total** | **8,981** | **22,752** | **14,224** |

Source: MoHSW 2014

Table 5.4 Vacancy rates at District Level

| Facility Level | District Hospitals | | |
|---|---|---|---|
| Profession | Available | Required | Shortage |
| Assistant Health Laboratory Technologist | 537 | 440 | - |
| Assistant Medical Officer | 886 | 3,520 | 2,634 |
| Assistant Nursing Officer | 2,526 | 7,260 | 4,734 |
| Allied Health Professionals | 960 | 3,300 | 2,761 |
| Clinical Assistant | 205 | - | - |
| Clinical Officer | 1,783 | - | - |
| Dental Specialist& Dental Officer | - | 220 | 220 |
| Assistant Dental Officer/Dental Therapist | 262 | 440 | 178 |
| Environmental Health Staff | 1,176 | 440 | |
| Health Laboratory Scientist | 17 | - | - |
| Health Laboratory Technologist | 429 | 660 | 231 |
| Manager | 299 | 220 | - |
| Medical attendant | 7,976 | 10,120 | 2,144 |
| Medical Doctor | 441 | 1,760 | 1,319 |
| Medical Specialists | 106 | 220 | 114 |
| Enrolled Nurse | 5,355 | 7,260 | 1,905 |
| Nursing Officer | 588 | 2,640 | 2,052 |
| Pharmacist | 169 | 220 | 51 |
| Allied non-Health Professional | 723 | 1,980 | 1,257 |
| Support Staff | 1,512 | 2,860 | 1,348 |
| **Grand Total** | **25,950** | **43,560** | **20,948** |

Source: MoHSW 2014

Table 5.5 Vacancy rates at Regional Referral Hospital Level

| Facility Level | Regional Refferal Hospital | | |
|---|---|---|---|
| Profession | Available | Required | Shortage |
| Allied non-Health Professional: | 113 | 425 | 312 |
| Medical Specialists | 62 | 750 | 688 |
| Assistant Dental Officer/Dental Therapist | 35 | 175 | 140 |
| Assistant Health Laboratory Technologist | 85 | 150 | 65 |
| Assistant Medical Officer | 292 | 550 | 258 |
| Assistant Nursing Officer | 878 | 1,925 | 1,047 |
| Allied Health Professionals | 377 | 675 | 298 |

Table 5.5 Continues

| Facility Level | Regional Refferal Hospital | | |
|---|---|---|---|
| Profession | Available | Required | Shortage |
| Clinical Assistant | 9 | - | - |
| Clinical Officer | 290 | - | - |
| Dental Specialist& Dental Officer | - | - | - |
| Environmental Health Staff | 107 | 75 | - |
| Health Laboratory Scientist | 6 | 25 | 19 |
| Health Laboratory Technologist | 142 | 200 | 58 |
| Manager | 24 | 25 | 1 |
| Medical attendant | 1,842 | 2,500 | 658 |
| Medical Doctor | 328 | 725 | 397 |
| Enrolled Nurse | 2,103 | 2,275 | 172 |
| Nursing Officer | 334 | 750 | 416 |
| Pharmacist | 38 | 25 | - |
| Support Staff | 205 | 575 | 370 |
| **Grand Total** | **7,270** | **11,825** | **4,899** |

Source: MoHSW 2014

Table 5.6 Vacancy rates at Bugando Zonal Referral Hospital

| Facility Level | Bugando Zonal Refferal Hospital | | |
|---|---|---|---|
| Profession | Available | Required | Shortage |
| Allied non-Health Professional: | 103 | 277 | 174 |
| Medical Specialists | 9 | 270 | 261 |
| Assistant Dental Officer/Dental Therapist | 1 | 6 | 5 |
| Assistant Health Laboratory Technologist | 1 | - | - |
| Assistant Medical Officer | 3 | - | - |
| Assistant Nursing Officer | 80 | 675 | 595 |
| Allied Health Professionals: | 72 | 182 | 119 |
| Pharmacist | 8 | 52 | 44 |
| Environmental Health Staff | - | 1 | 1 |
| Health Laboratory Scientist | - | 10 | 10 |
| Health Laboratory Technologist | 17 | 23 | 6 |
| Manager | - | 2 | 2 |
| Medical attendant | 277 | 407 | 130 |
| Medical Doctor | 64 | 144 | 80 |
| Enrolled Nurse | 196 | - | - |
| Nursing Officer | 22 | 320 | 307 |
| Support Staff: | 53 | 211 | 158 |
| **Grand Total** | **906** | **2,580** | **1,893** |

Source: MoHSW 2014

Table 5.7 Vacancy rates at KCMC Zonal Referral Hospital

| Facility Level | KCMC Zonal Referal Hospital | | |
|---|---|---|---|
| Profession | Available | Required | Shortage |
| Allied non-Health Professional: | 87 | 126 | 39 |
| Medical Specialists | 14 | 123 | 110 |
| Assistant Medical Officer | 1 | - | - |
| Assistant Nursing Officer | 134 | 452 | 318 |
| Allied Health Professionals: | 90 | 131 | 141 |
| Clinical Assistant | - | - | - |
| Clinical Officer | - | - | - |
| Dental Specialist& Dental Officer | - | - | - |
| Assistant Dental Officer/Dental Therapist | - | 8 | 8 |
| Environmental Health Staff | - | 1 | 1 |
| Health Laboratory Scientist | 1 | 14 | 13 |
| Health Laboratory Technologist | 25 | 13 | - |
| Manager | 4 | - | - |
| Medical attendant | 244 | 287 | 43 |
| Medical Doctor | 24 | 24 | - |
| Enrolled Nurse | 134 | - | - |
| Nursing Officer | 28 | 240 | 212 |
| Pharmacist | 4 | 8 | 4 |
| Support Staff | 273 | 206 | + |
| **Grand Total** | **1,063** | **1,633** | **889** |

Source: MoHSW 2014

Table 5.8 Vacancy rates at Mbeya Zonal Referral Hospital

| Facility Level | Mbeya Zonal Refferal Hospital | | |
|---|---|---|---|
| Profession | Available | Required | Shortage |
| Medical Specialists | 7 | 57 | 50 |
| Assistant Dental Officer/Dental Therapist | 3 | 2 | 2 |
| Assistant Health Laboratory Technologist | 1 | 16 | 15 |
| Assistant Medical Officer | 12 | 4 | - |
| Assistant Nursing Officer | 8 | 335 | 327 |
| Allied Health Professionals: | 48 | 84 | 36 |
| Clinical Assistant | - | - | - |
| Clinical Officer | 3 | | |
| Dental Specialist& Dental Officer | - | - | - |
| Environmental Health Staff | 1 | - | |
| Health Laboratory Scientist | 1 | 6 | 5 |
| Health Laboratory Technologist | 23 | 11 | - |
| Manager | 2 | 3 | 1 |
| Medical attendant | 229 | 354 | 125 |
| Medical Doctor | 71 | 52 | - |
| Enrolled Nurse | 165 | - | - |

Table 5.8 Continues

| Facility Level | Mbeya Zonal Refferal Hospital | | |
|---|---|---|---|
| Profession | Available | Required | Shortage |
| Nursing Officer | 107 | 141 | 34 |
| Allied non-Health Professional: | 17 | 55 | 38 |
| Pharmacist | 15 | 6 | - |
| Support Staff | 36 | 25 | - |
| **Grand Total** | **749** | **1,151** | **633** |

Source: MoHSW 2014

Table 5.9 Vacancy rates at CCBRT Super specialty Hospital

| Facility Level | CCBRT | | |
|---|---|---|---|
| Profession | Available | Required | Shortage |
| Allied non-Health Professional: | 139 | 143 | 4 |
| Medical Specialists | 44 | 48 | 4 |
| Assistant Medical Officer | 5 | - | - |
| Assistant Nursing Officer | 47 | 122 | 75 |
| Allied Health Professionals: | 66 | 72 | 6 |
| Clinical Officer | 2 | - | - |
| Environmental Health Staff | 1 | 3 | 2 |
| Health Laboratory Technologist | 1 | 3 | 2 |
| Medical attendant | 12 | 31 | 19 |
| Medical Doctor | 6 | 6 | - |
| Enrolled Nurse | 48 | - | - |
| Nursing Officer | 19 | 36 | 17 |
| Pharmacist | 1 | 2 | 1 |
| Support Staff | 65 | 84 | 19 |
| **Grand Total** | **456** | **550** | **149** |

Source: MoHSW 2014

Table 5.10 Vacancy rates at Kibong'oto specialized Hospital

| Facility Level | Kibong'oto Hospital | | |
|---|---|---|---|
| Profession | Available | Required | Shortage |
| Allied non-Health Professional: | 10 | 40 | 30 |
| Medical Specialists | 7 | 8 | 1 |
| Assistant Dental Officer/Dental Therapist | 1 | - | - |
| Assistant Health Laboratory Technologist | - | - | - |
| Assistant Medical Officer | 1 | - | - |
| Assistant Nursing Officer | 23 | 87 | 64 |
| Allied Health Professionals: | 13 | 25 | 12 |
| Clinical Assistant | - | - | - |
| Clinical Officer | 5 | - | - |
| Dental Specialist& Dental Officer | - | - | - |
| Environmental Health Staff | - | 2 | 2 |
| Health Laboratory Scientist | 1 | - | - |

Table 5.10 Continues

| Facility Level | Kibong'oto Hospital | | |
|---|---|---|---|
| Profession | Available | Required | Shortage |
| Health Laboratory Technologist | - | 7 | 7 |
| Manager | 4 | 2 | + |
| Medical attendant | 95 | 50 | - |
| Medical Doctor | 16 | 20 | 4 |
| Enrolled Nurse | 34 | 42 | 8 |
| Nursing Officer | 15 | 50 | 35 |
| Pharmacist | 2 | 2 | - |
| Support Staff | 24 | 24 | - |
| **Grand Total** | **251** | **359** | **163** |

Source: MoHSW 2014

Table 5.11 Vacancy rates at Mirembe specialized Hospital

| Facility Level | Mirembe Hospital | | |
|---|---|---|---|
| Profession | Available | Required | Shortage |
| Assistant Dental Officer/Dental Therapist | - | 1 | 1 |
| Assistant Health Laboratory Technologist | - | 8 | 8 |
| Assistant Medical Officer | 3 | - | - |
| Assistant Nursing Officer | 23 | 399 | 376 |
| Allied Health Professionals: | 17 | 73 | 56 |
| Clinical Assistant | 1 | - | - |
| Clinical Officer | 5 | - | - |
| Dental Specialist& Dental Officer | - | 1 | 1 |
| Environmental Health Staff | - | 3 | 3 |
| Health Laboratory Scientist | - | 1 | 1 |
| Health Laboratory Technologist | - | 4 | 4 |
| Manager | 3 | 3 | - |
| Medical attendant | 89 | 147 | 58 |
| Medical Doctor | 19 | 28 | 9 |
| Medical Specialists | 4 | 5 | 1 |
| Enrolled Nurse | 59 | - | - |
| Nursing Officer | 17 | 34 | 17 |
| Allied non-Health Professional: | 8 | 25 | 17 |
| Pharmacist | 4 | 3 | - |
| Support Staff | 29 | 18 | - |
| **Grand Total** | **281** | **744** | **543** |

Source: MoHSW 2014

Table 5.12 Vacancy rates at Muhimbili Orthopaedic Institute

| Facility Level | Muhimbili Orthopaedic Institute | | |
|---|---|---|---|
| Profession | Available | Required | Shortage |
| Allied non-Health Professional: | 58 | 68 | 10 |

Table 5.12 Continues

| Facility Level | Muhimbili Orthopaedic Institute | | |
|---|---|---|---|
| Profession | Available | Required | Shortage |
| Assistant Dental Officer/Dental Therapist | - | - | - |
| Assistant Health Laboratory Technologist | - | 2 | 2 |
| Assistant Medical Officer | - | - | - |
| Assistant Nursing Officer | 182 | 194 | 12 |
| Allied Health Professionals: | 57 | 77 | 20 |
| Clinical Assistant | - | - | - |
| Clinical Officer | - | - | - |
| Dental Specialist& Dental Officer | - | - | - |
| Environmental Health Staff | - | 1 | 1 |
| Health Laboratory Scientist | 1 | 3 | 2 |
| Health Laboratory Technologist | 5 | 6 | 1 |
| Manager | - | 1 | 1 |
| Medical attendant | 107 | 154 | 47 |
| Medical Doctor | 50 | 54 | 4 |
| Medical Specialists | 36 | 59 | 23 |
| Enrolled Nurse | 17 | - | - |
| Nursing Officer | 30 | 126 | 96 |
| Pharmacist | 2 | 2 | - |
| Support Staff | 57 | 29 | - |
| **Grand Total** | **602** | **776** | **219** |

Source: MoHSW 2014

Table 5.13 Vacancy rates at Ocean Road Cancer Institute specialized Hospital

| Facility Level | Ocean Road Cancer Institute | | |
|---|---|---|---|
| Profession | Available | Required | Shortage |
| Allied non-Health Professional: | 24 | 32 | 8 |
| Medical Specialists | 15 | 37 | 22 |
| Assistant Dental Officer/Dental Therapist | - | - | - |
| Assistant Health Laboratory Technologist | - | - | - |
| Assistant Medical Officer | - | - | - |
| Assistant Nursing Officer | - | 121 | 121 |
| Allied Health Professionals: | 33 | 57 | 22 |
| Pharmacist | - | - | - |
| Clinical Assistant | - | - | - |
| Clinical Officer | - | - | - |
| Dental Specialist& Dental Officer | - | - | - |
| Environmental Health Staff | - | 1 | 1 |
| Health Laboratory Scientist | 4 | 5 | 1 |
| Health Laboratory Technologist | 5 | 14 | 9 |
| Manager | 1 | - | |
| Medical attendant | 47 | 74 | 27 |

Table 5.13 Continues

| Facility Level | Ocean Road Cancer Institute | | |
|---|---|---|---|
| Profession | Available | Required | Shortage |
| Medical Doctor | 34 | 30 | - |
| Pharmacist | - | 1 | 1 |
| Enrolled Nurse | 9 | - | - |
| Nursing Officer | 64 | 76 | 12 |
| Pharmacist | 2 | 1 | - |
| Support Staff | 15 | 40 | 25 |
| **Grand Total** | **253** | **489** | **249** |

Source: MoHSW 2014

Table 5.14 Vacancy rates at Muhimbili National Hospital

| Facility Level | Muhimbili National Hospital | | |
|---|---|---|---|
| Profession | Available | Required | Shortage |
| Medical Specialists | 178 | 382 | 204 |
| Assistant Dental Officer/Dental Therapist | - | - | - |
| Assistant Medical Officer | 10 | - | - |
| Assistant Nursing Officer | 730 | 1,613 | 883 |
| Allied Health Professionals: | 245 | 337 | 92 |
| Clinical Assistant | - | - | - |
| Clinical Officer | 2 | - | - |
| Dental Specialist& Dental Officer | - | 8 | 8 |
| Support Staff: | 196 | 289 | 93 |
| Environmental Health Staff | 2 | 4 | 2 |
| Assistant Health Laboratory Technologist | 18 | 14 | + |
| Health Laboratory Scientist | 28 | 3 | - |
| Health Laboratory Technologist | 37 | 63 | 26 |
| Manager | - | - | - |
| Medical attendant | 730 | 826 | 96 |
| Medical Doctor | 207 | 265 | 58 |
| Enrolled Nurse | 256 | 646 | 390 |
| Nursing Officer | 94 | 919 | 825 |
| Allied non-Health Professional: | 201 | 268 | 67 |
| Pharmacist | 18 | 27 | 9 |
| **Grand Total** | **2,952** | **5,664** | **2,753** |

Source: MoHSW 2014

## 5.2 Work environment

The consultative policy survey revealed that productivity of health workers is perceived to be low. The majority of respondents attributed this low productivity to:

1. poor motivation, low incentives and poor facilitation
2. poor working environment and impromptu payments
3. over-taxation of remuneration received

4. inadequate equipment and facilities
5. few opportunities for advancement and promotion
6. infrequent and inadequate supervision
7. low job security
8. unbecoming behaviour of seniors and harassment
9. language barrier between service providers and clients
10. under-staffing and resulting heavy work load
11. poor morale and poor attitude of health workers toward work
12. poor enforcement of ethical code of conduct
13. inappropriate disciplinary actions
14. lack of training and skills in management and proper accounting procedures
15. cultural factors among community members.

### 5.3 Recruitment process of health workers

Recruitment starts with identification of vacancies in the health sector. 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 lastly Ministry of Finance which is responsible for financing new posts in form of salaries.

At Central level, The Human Resource and Administration division of the Ministry of Health and Social Welfare in liaison with departmental heads, programme managers and other heads of units do this. The personnel division then seeks clearance from Ministry of President Office, Public Service Management (POPSM) to fill the vacant positions. If there is no objection from the MPS, then the funded posts are granted to the MoHSW for filling the vacant posts. Table 5.15 shows recruitment permits, posting of new health workers and funded post remained from 2010-2013.

Table 5.15 Recruitment Permits, Posting of New Health Workers and Funded Post Remained 2010/2011

| Year | Employers | Profession | Permit | Posted | Funded Posts Not Filled |
|---|---|---|---|---|---|
| 2010/ 2011 | Local Government Authorities (Councils) | Assistant Environment Health Officer | 282 | 75 | 207 |
| | | Assistant Dental Officer | 36 | 5 | 31 |
| | | Assistant Medical Officer | 172 | 48 | 124 |
| | | Assistant Nursing Officer | 293 | 286 | 7 |
| | | Assistant Technologist | 146 | 144 | 2 |
| | | Assistant Technologist (Lab) | 18 | 18 | - |
| | | Assistant Technologist (Pharmacy) | 8 | 8 | - |
| | | Assistant Technologist (Radiographer) | 2 | 1 | 1 |
| | | Biomedical Engineer | 1 | - | 1 |
| | | Biomedical Engineering Technician | 7 | - | 7 |
| | | Clinical Assistant | 224 | 182 | 42 |
| | | Clinical Officer | 1,350 | 1,044 | 306 |
| | | Dental Surgeon | 17 | 15 | 2 |
| | | Enviroment Health Officer | 241 | 48 | 193 |
| | | Environmental Health Assistant | 13 | 1 | 12 |
| | | Health Secretary | 26 | 26 | - |
| | | Launderer | 48 | 15 | 33 |
| | | Medical Attendant | 921 | 917 | 4 |
| | | Medical Doctor | 127 | 123 | 4 |
| | | Medical Specialist/Consultants | 1 | 1 | - |
| | | Medical Technician (Lab) | 203 | 167 | 36 |
| | | Nursing Officer | 290 | 290 | - |
| | | Occupational Therapist | 1 | 1 | - |
| | | Pharmacist | 38 | 36 | 2 |

Table 5.15 Continues

| Year | Employers | Profession | Permit | Posted | Funded Posts Not Filled |
|---|---|---|---|---|---|
| | | Physiotherapist | 15 | 14 | 1 |
| | | Physiotherapist Assistant | 1 | 1 | - |
| | | Records Management Assistant | 80 | 27 | 53 |
| | | Technogist (Pharm., Dental, Radiog. etc) | 215 | 132 | 83 |
| | | Assistant Biomedical Engineering Technician | 10 | - | 10 |
| | | Assistant Physiotherapist | 7 | 1 | 6 |
| | | Chemist | 1 | - | 1 |
| | | Dental Officer | 1 | 1 | - |
| | | Dental Therapist | 50 | 25 | 25 |
| | | Nurse | 1,670 | 1,378 | 292 |
| | | Physiotherapist/Occupational Physiotherapist | 2 | 1 | 1 |
| | | **Total** | **6,517** | **5,031** | **1,486** |
| | Ministries Departments and Agencies (MDAs) | Assistant Medical Officer | 8 | 5 | 3 |
| | | Assistant Nursing Officer | 30 | 30 | - |
| | | Assistant Technologist | 4 | 4 | - |
| | | Biomedical Engineer | 4 | - | 4 |
| | | Clinical Assistant | 2 | 2 | - |
| | | Clinical Officer | 18 | 17 | 1 |
| | | Dental Surgeon | 9 | 9 | - |
| | | Enviroment Health Officer | 22 | 10 | 12 |
| | | Health Secretary | 1 | 1 | - |
| | | Launderer | 10 | 5 | 5 |
| | | Medical Attendant | 43 | 43 | - |

Table 5.15 Continues

| Year | Employers | Profession | Permit | Posted | Funded Posts Not Filled |
|---|---|---|---|---|---|
| | | Medical Doctor | 22 | 22 | - |
| | | Medical Specialist/Consultants | 2 | 2 | - |
| | | Medical Technician (Lab) | 11 | 9 | 2 |
| | | Nursing Officer | 21 | 21 | - |
| | | Pharmacist | 10 | 10 | - |
| | | Physiotherapist | 4 | 4 | - |
| | | Technogist (Pharm, Dental, Radiog. etc) | 11 | 11 | - |
| | | Chemist | 3 | - | 3 |
| | | Nurse | 79 | 77 | 2 |
| | | **Total** | **314** | **282** | **32** |
| | Regional Administrative Secretary | Assistant Dental Officer | 2 | - | 2 |
| | | Assistant Medical Officer | 25 | 11 | 14 |
| | | Assistant Nursing Officer | 37 | 33 | 4 |
| | | Assistant Technologist | 3 | 2 | 1 |
| | | Clinical Officer | 15 | 10 | 5 |
| | | Dental Surgeon | 2 | 2 | - |
| | | Enviroment Health Officer | 10 | - | 10 |
| | | Health Secretary | 2 | 2 | - |
| | | Launderer | 6 | - | 6 |
| | | Medical Attendant | 59 | 59 | - |
| | | Medical Doctor | 43 | 40 | 3 |
| | | Medical Specialist/Consultants | 20 | 7 | 13 |
| | | Health Technologist (Lab) | 29 | 21 | 8 |
| | | Nursing Officer | 73 | 48 | 25 |

Table 5.15 Continues

| Year | Employers | Profession | Permit | Posted | Funded Posts Not Filled |
|---|---|---|---|---|---|
| | | Occupational Therapist | 1 | 1 | - |
| | | Pharmacist | 5 | 3 | 2 |
| | | Physiotherapist | 3 | 2 | 1 |
| | | Records Management Assistant | 13 | 4 | 9 |
| | | Technogist (Pharm., Dental, Radiog. etc) | 21 | 12 | 9 |
| | | Chemist | 1 | - | 1 |
| | | Dental Officer | 1 | 1 | - |
| | | Dental Therapist | 2 | 2 | - |
| | | Nurse | 128 | 83 | 45 |
| | | Nutrition Staff | 1 | 1 | - |
| | | Total | 502 | 344 | 158 |
| | | **Total for the year 2010/11** | **7,333** | **5,657** | **1,676** |
| 2011/ 2012 | Local Government Authorities | Assistant Environment Health Officer | 22 | 13 | 9 |
| | | Assistant Dental Officer | 47 | 2 | 45 |
| | | Assistant Environment Health Officer | 540 | 148 | 392 |
| | | Assistant Medical Officer | 225 | 12 | 213 |
| | | Assistant Medical Recoder | 1 | - | 1 |
| | | Assistant Nursing Officer | 658 | 656 | 2 |
| | | Assistant Physiotherapist | 1 | - | 1 |
| | | Assistant Technologist | 137 | 133 | 4 |
| | | Assistant Technologist (Lab) | 123 | 121 | 2 |
| | | Assistant Technologist (Pharmacy) | 16 | 16 | - |
| | | Assistant Technologist (Radiographer) | 4 | 3 | 1 |
| | | Biomedical Engineer | 7 | - | 7 |
| | | Biomedical Engineering Technician | 17 | - | 17 |

Table 5.15 Continues

| Year | Employers | Profession | Permit | Posted | Funded Posts Not Filled |
|---|---|---|---|---|---|
| | | Catering Officer | 2 | - | 2 |
| | | Clinical Assistant | 546 | 409 | 137 |
| | | Clinical Officer | 1,369 | 824 | 545 |
| | | Dental Assistant | 3 | - | 3 |
| | | Dental Officer | 5 | 3 | 2 |
| | | Dental Surgeon | 15 | 10 | 5 |
| | | Dental Therapist | 79 | 36 | 43 |
| | | Enviroment Health Officer | 119 | 18 | 101 |
| | | Environmental Health Assistant | 104 | 10 | 94 |
| | | Health Laboratory Scientists | 2 | - | 2 |
| | | Health Secretary | 55 | 52 | 3 |
| | | Launderer | 102 | - | 102 |
| | | Medical Attendant | 1,029 | 1,023 | 6 |
| | | Medical Doctor | 169 | 160 | 9 |
| | | Medical Specialist (Gynaecologist) | 1 | - | 1 |
| | | Medical Specialist (Physician) | 1 | - | 1 |
| | | Medical Specialist (Radiologist) | 1 | - | 1 |
| | | Medical Specialist/Consultants | 31 | 13 | 18 |
| | | Medical Technician (Lab) | 190 | 124 | 66 |
| | | Nurse | 1,916 | 1,911 | 5 |
| | | Nursing Officer | 127 | 82 | 45 |
| | | Occupational Therapist | 2 | 1 | 1 |
| | | Optometrist | 1 | 1 | - |
| | | Pharmacist | 40 | 36 | 4 |
| | | Physiotherapist | 19 | 14 | 5 |

Table 5.15 Continues

| Year | Employers | Profession | Permit | Posted | Funded Posts Not Filled |
|---|---|---|---|---|---|
| | | Physiotherapist Assistant | 3 | - | 3 |
| | | Physiotherapist Asst/Occupational Therapist Assistant | 2 | 1 | 1 |
| | | Physiotherapist/Occupational Therapist | 1 | 1 | - |
| | | Records Management Assistant | 46 | 39 | 7 |
| | | Technogist (Pharm., Dental, Radiog. etc) | 243 | 160 | 83 |
| | | Anaethesia | 2 | - | 2 |
| | | Assistant Biomedical Engineering Technician | 15 | - | 15 |
| | | Nurse | 50 | 50 | - |
| | | Nutrition Staff | 42 | 33 | 9 |
| | | **Total** | **8,130** | **6,115** | **2,015** |
| | Ministries Departments And Agencies | Assistant Dental Officer | 5 | - | 5 |
| | | Assistant Medical Officer | 13 | - | 13 |
| | | Assistant Nursing Officer | 40 | 40 | - |
| | | Assistant Technologist | 30 | 16 | 14 |
| | | Biomedical Engineer | 3 | 2 | 1 |
| | | Chemist | 6 | - | 6 |
| | | Clinical Assistant | 25 | 25 | - |
| | | Clinical Officer | 65 | 16 | 49 |
| | | Dental Surgeon | 7 | 7 | - |
| | | Enviroment Health Officer | 16 | 6 | 10 |
| | | Health Laboratory Scientists | 10 | 10 | - |
| | | Health Secretary | 2 | 2 | - |
| | | Launderer | 2 | - | 2 |
| | | Medical Attendant | 51 | 51 | - |

Table 5.15 Continues

| Year | Employers | Profession | Permit | Posted | Funded Posts Not Filled |
|---|---|---|---|---|---|
| | | Medical Doctor | 30 | 30 | - |
| | | Medical Specialist/Consultants | 16 | 1 | 15 |
| | | Medical Technician (Lab) | 9 | 9 | - |
| | | Nurse | 78 | 78 | - |
| | | Nursing Officer | 22 | 21 | 1 |
| | | Pharmacist | 9 | 9 | - |
| | | Physiotherapist | 6 | 6 | - |
| | | Technogist (Pharm., Dental, Radiog. etc) | 21 | 21 | - |
| | | Assistant Biomedical Engineering Technician | 3 | - | 3 |
| | | **Total** | **469** | **350** | **119** |
| | Regional Administrative Secretaries | Assistant Dental Officer | 6 | 1 | 5 |
| | | Assistant Environment Health Officer | 2 | 2 | - |
| | | Assistant Medical Officer | 47 | 9 | 38 |
| | | Assistant Nursing Officer | 69 | 69 | - |
| | | Assistant Technologist | 11 | 10 | 1 |
| | | Assistant Technologist (Lab) | 5 | 5 | - |
| | | Biomedical Engineer | 1 | - | 1 |
| | | Biomedical Engineering Technician | 5 | - | 5 |
| | | Clinical Officer | 41 | 27 | 14 |
| | | Dental Officer | 3 | - | 3 |
| | | Dental Surgeon | 3 | 3 | - |
| | | Dental Therapist | 4 | - | 4 |
| | | Dhobi | 1 | - | 1 |
| | | Enviroment Health Officer | 11 | 3 | 8 |
| | | Health Laboratory Scientists | 9 | 7 | 2 |

Table 5.15 Continues

| Year | Employers | Profession | Permit | Posted | Funded Posts Not Filled |
|---|---|---|---|---|---|
| | | Health Secretary | 4 | 4 | - |
| | | Launderer | 8 | - | 8 |
| | | Medical Attendant | 97 | 95 | 2 |
| | | Medical Doctor | 62 | 62 | - |
| | | Medical Doctor (Surgeon) | 1 | 1 | - |
| | | Medical Specialist/Consultants | 22 | 1 | 21 |
| | | Medical Technician (Lab) | 24 | 15 | 9 |
| | | Nurse | 144 | 144 | - |
| | | Nursing Officer | 56 | 33 | 23 |
| | | Occupational Therapist | 5 | 2 | 3 |
| | | Pharmacist | 24 | 7 | 17 |
| | | Physiotherapist | 11 | 6 | 5 |
| | | Records Management Assistant | 13 | 9 | 4 |
| | | Technogist (Pharm., Dental, Radiog. etc) | 52 | 42 | 10 |
| | | Assistant Biomedical Engineering Technician | 1 | - | 1 |
| | | Nutrition Staff | 6 | 6 | - |
| | | Total | 748 | 563 | 185 |
| | | Total for the year 2011/12 | **9,347** | **7,028** | **2,319** |

Source: MoHSW 2014

## 5.4 The power to appoint

### 5.4.1 Central level staff

The power to appoint health workers is shared among various authorities. At the central level if appointment is for a head of Section or department level and above, it is between the President office, and Permanent Secretary of the ministry.

### 5.4.2 District health staff and Regional Administration

The Exucutive directors of Local Government Levels recruit health workers serving in local governments as enshrined in 1982 of the Local Government Act. Requests for recruitment or any other human matter originate from the Council and Regional Administration. These requests are submitted to the POPSM for validation and there after to the MoF for salary funding.

### 5.4.3 Recruitment policy

This section deals with recruitment including vacancies, unemployment etc; how the health workforce is recruited, how the recruitment is handled at different levels, recruitment capacities, what proportion of graduates are recruited; vacant posts, unemployment of health professionals.

### 5.4.4 Deployment and distribution mechanisms

Recruitment at all levels occurs against a defined establishment of employment posts( HRHSW Staffing Levels and Health Sector Scheme of Service) . However, it has been found that many districts prefer to employ less qualified personnel because they are cheaper to pay. Districts have the responsibility to recruit personnel in accordance to resources available to them. During the recruitment and selection either a low salary scale is offered or low cadre staffs are recruited. The tendency of skipping Medical doctor and prefer more middle level cadres has been observed due to high level of MDs salaries. It has been said, a salary of a doctor can be utilised to employ more then three Clincal Officers. when you try to ask why, you will be told that Assistant Medical Doctor and Clical Officers can also do the job. Much as these can do the job, it should be noted that each cadre of staff is trained for certain competencies. Thus there still HR difficulties under decentralised management in the area of providing incentives to attract and recruit the most qualified health work force especially in the less endowed districts.

### 5.4.5 Attrition and losses

Too little is known about staff dynamics and attrition, the reports indicate that only 200 of all medical doctors graduating (700) do not get government employment and how many are flocking/migrate abroad, this is not known. Results extracted from HRHSWIS and TIIS analysis shows the current status of attrition at different levels of health facilities as per Table 5.16 hereto follows.

Table 5.16 Attrition and Losses for Year 2013

| Cadre | Retired | Transfered | Deceased | Abscondent | Total |
|---|---|---|---|---|---|
| Assistant Dental Officer | 2 | 1 | - | - | 3 |
| Assistant Environmental Health Officer | 1 | 2 | 3 | - | 6 |
| Assistant Laboratory Technologist | 1 | - | 1 | 1 | 3 |
| Assistant Medical Officer | 6 | 5 | 2 | 2 | 15 |
| Assistant Nursing Officer | 10 | 7 | 1 | 4 | 22 |
| Assistant Pharmaceutical Technologist | - | - | 1 | - | 1 |
| Clinical Assistant | 3 | - | - | - | 3 |
| Clinical Officer | 16 | 9 | 5 | 2 | 32 |
| Dental Surgeon | - | 1 | - | - | 1 |
| Dental Technologist | 1 | - | - | - | 1 |
| Environmental Health Assistant | 2 | - | - | - | 2 |
| Environmental Health Officer | 1 | 2 | - | - | 3 |
| Health Secretary | - | 2 | - | - | 2 |
| Medical Attendant | 45 | 12 | 9 | 2 | 68 |
| Medical Doctor | 2 | 3 | - | 2 | 7 |
| Medical Laboratory Technologist | 1 | - | - | - | 1 |
| Medical Record Technician | 2 | 1 | - | - | 3 |
| Medical Specialist | 1 | - | - | - | 1 |
| Nurse | 24 | 20 | 12 | 5 | 61 |
| Nursing Officer | 9 | 7 | 1 | 1 | 18 |
| Pharmacist | 1 | - | - | 1 | 2 |
| Physiotherapist | - | 2 | - | - | 2 |
| **Total** | **128** | **74** | **35** | **20** | **257** |

Source: MoHSW 2014

### 5.5 Nature of financial and non financial incentives

In Tanzania the Government has initiated a pay and incentive scheme for attracting staff to areas that are considered hard to reach and hard to stay. The scheme has been approved by POPSM and awiting MoF for fund release. It is expected that the scheme will create visible incentives forremote areas to attract and retain health workers.

### 5.6 Infrastructure

The provision of decent staff accommodation and basic amenities like clean water and lighting has also been shown to encourage health workers to stay in hitherto unattractive areas. However, in most cases it has been noted that both monetary and non-monetary incentives should be combined for best results. Furthermore monetary incentives have been noted to be of particular value in attracting health workers to an area whereas non-monetary incentives tend to play a bigger role in retention and distribution of staff within a certain locale/district.

# 6. GOVERNANCE FOR HRHSW

## 6.1 HRHSW 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 HRHSW 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 and Social WelfareStrategic 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 HRHSW

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. 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:

- To develop policies, plans legislation, guidelines on health and social welfare human resources;
- To ensure the development of health and social welfare human resources development plans and budgets;
- To provide support to health and social welfare training institutions;
- Assurance of quality and standards of training;
- To supervise and monitor training institutions; and
- To ensure proper fund allocation, utilization and accounting.
- Details of the Division are shown in Annex below.

Development of HRHSW policies and plans involve various stakeholders. Under the SWAp mechanism, MoHSW has an HRHSW working group composed representatives of line ministries, development partners, FBOs, CSOs and private sectors. The HRHSW 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 HRHSW 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 HRHSW Information System

To better inform HRHSW policy and planning, efforts were made by HRHSW development partners recently to obtain sensible HRHSW data and information. With support from Japan International Cooperation Agency (JICA), two information systems have been developed called Human Resource for Health and Social WelfareInformation System (HRHSWIS) and Training Institution Information System

(TIIS). The former is for health facilities and the later is for training institutions. HRHSWIS is installed in all regions, councils and referral hospitals, and TIIS in all training institutions and universities that producing health professionals. The systems are capable of assisting users to collect quality information and help them generate varieties of reports from individual staff reports to country aggregate. However the system is not without challenges.

Some of the existing challenges in executing the systems include:

- Difficulties in collecting HRHSW data from private and Faith Based Organization's facilities
- Since the system is computerised- it is still challenging to some councils, which have not yet connected to electric power supply.
- Familiarity of these tools by HR managers is minimal
- Motivation to utilize the system is low.

### 6.5 HRHSW research

HRHSW research has been going on initiated by government and individual researchers. The government of the United Republic of Tanzania realises the importance of HRHSW research in the provision of information for health planning and decision-making. In 2005 and 2011, the Ministry of health and Social welfare collected and synthesized various HRHSW research studies. The 2011 research synthesis noted a research gap with regard to migration, partnership, production and performance of health care workers. The challenging part is the coordination and utilisation of HRHSW research to inform HRHSW plans, policies and strategies due to the fact that previous studies focused more on identifying "What questions" and less on "How and why questions" .

### 6.6 Stakeholders in HRHSW

The Human Resource for Health and Social WelfareTechnical Working Group (HRHSW TWG) is a multsectoral group comprised of Human Resource for Health and Social WelfareStakeholders from the Government Line Ministries, Health Training and Research Institutions, Faith Based Organisation, Private Sector, Civil Society Groups and Development Partners[1]. The Group is guided by the MoHSW Approved Terms of Reference which defines roles and responsibilities of the HRHSW Working Group. The technical working group has been divided into four thematic groups (SO teams) based on the seven strategic objectives of the HRHSW Strategic Plan (HRHSWSP). Each SO team meets on a monthly basis in preparation for the monthly technical working group meeting. In addition, to the regular meetings extraordinary meetings are summoned. The technical working group has maintained

[1] Members of HRH Working Group

informal links with the District and Regional, Health Care Financing, PPP, Social welfare Protection and monitoring and evaluation technical working groups.

# ANNEX

## 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 HRHSW Working Group

### Mission of the HRHSW Working Group

To provide sound advice and technical directions for sustainable development of HRHSW 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 HRHSW workforce in Tanzania Mainland
- Multi-sector collaboration and engagement of HRHSW stakeholders on important HRHSW issues that impact on the health sectors performance
- Partnership and advocacy to enhance HRHSW development: Coordinate and monitor implementations of existing priority HRHSW issues and plans; and identify important emerging HRHSW issue that requires attention.
- Promote information and evidence for decision making; convene regular briefing and advocacy meeting/dialogue on important HRHSW issues.

**Assigned Tasks of the working group**

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

a. To identify and outline implementation arrangements to address current HRHSW priorities for the immediate, medium and long term based on sound technical and thematic reports.
b. To identify current and emerging systematic barriers to policy and strategy implementation with a view to advice respective authorities timely for remedial measures.
c. To assist the MOHSW to develop and implement a multi-sector HRHSW strategic plan
d. To receive and comment on HRHSW updates from members, sectors, and groups with respect to ongoing or proposed programme, initiatives and action plans.
e. To provide regular necessary advice existing HRHSW workforce information
f. To provide systematic coordination arrangements for HRHSW activities in the country
g. To provide advice of the required linkages and partnership for HRHSW development in the country.
h. Produce regular reports, briefing papers and disseminate good practices documents on HRHSW for stakeholders.
i. To monitor progress with implementation of HRHSW strategies in line with existing key policy and plan guidelines and sector reforms milestones.
j. To undertake any assignment that may from time to time be allocated by the MOHSW.

**Terms of appointment**

a. Appointment of the Chair and Co Chair persons will be done by Permanent Secretary.
b. 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
c. Membership is based on institutional representation with a designated focal personal who is expected to participate actively in the activities of the HRHSW working group. Terms that members serve is based on the acceptable performance and interest.
d. The period of services for appointed members will be for two years, following approval by the Permanent Secretary.
e. Special efforts are to be undertaken to ensure adequate performance on HRHSW development.
f. Participate in all meetings of the working group
g. Maintenance of "Institutional Memory" among the members.

**Alternates membership:**

a. Provision for alternate members is provided and recognized subject to existing rules and procedures and the approval of the chairperson of the HRHSW working group.
b. 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:**

a. Any appointment will be annulled by the appointing authority if the attributes and performance of appointed member is below expectations.
b. 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 HRHSW secretariat:**

Undertake the following:

a. The HRHSW Working Group secretariat will relate with the HRD department of the MOHSW
b. Facilitate and guarantee the use of office space and communications systems and designated staff of facilitate the work and activities of the working group
c. Maintain regular communication with the top management of the MOHSW on important HRHSW issues and initiatives
d. Arrangement and organization for all meetings of the working group
e. Documentation of meetings and production of quality minutes

f. Undertake the maintenance and regular up-date of existing HRHSW workforce information
g. Undertake production and distribution of required briefing documents as may be determined from time to time
h. Collate and disseminate required information to identified groups and organization as may be required from time to time
i. Undertake any additional assignments that may from time to time be allocated
j. Produce a regular intervals progress reports on important HRHSW activities.