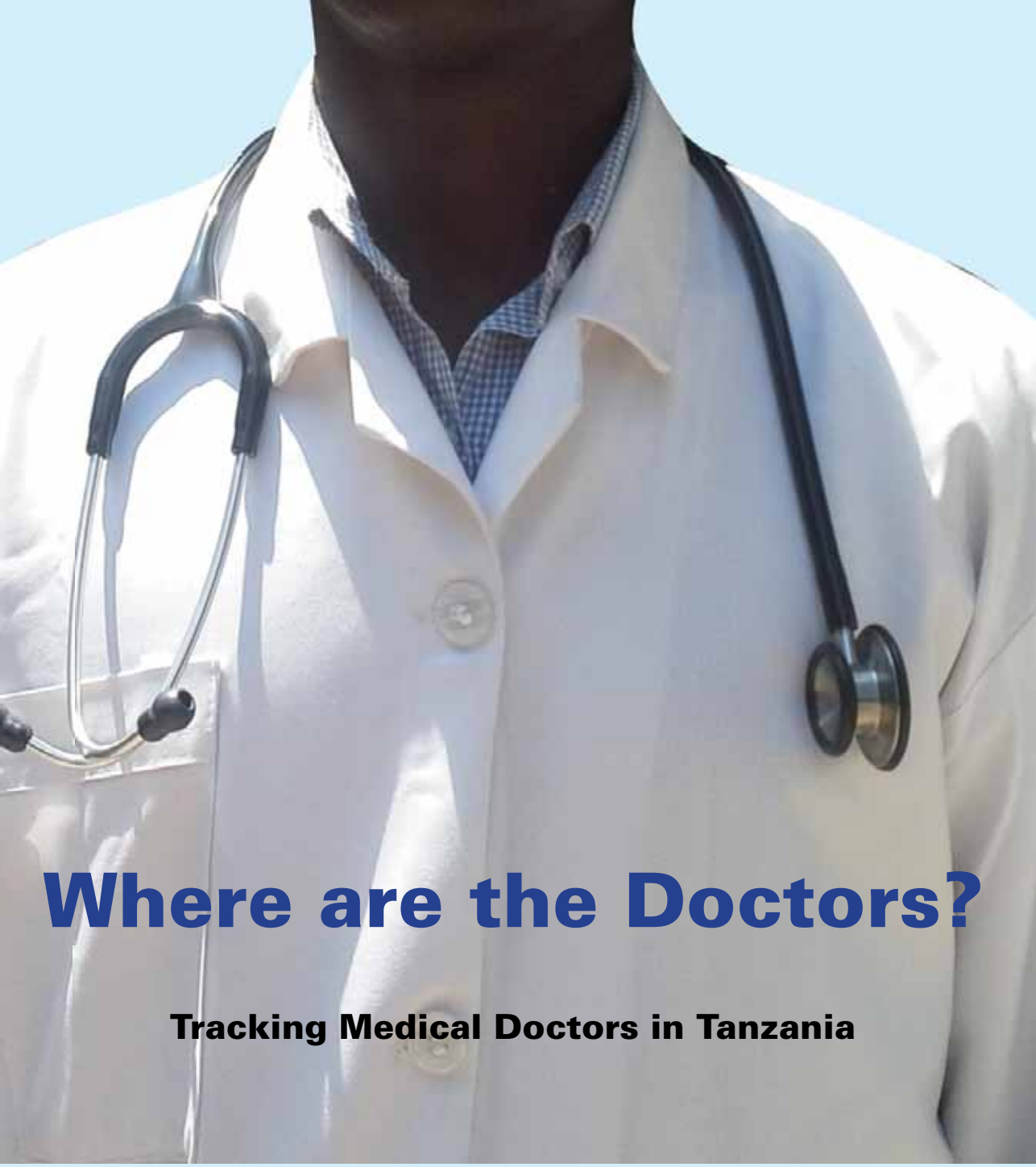


Where are the Doctors?

Tracking Medical Doctors in Tanzania

Sikika

Medical Association of Tanzania

Where are the Doctors?

Tracking Medical Doctors in Tanzania

September 2013

ISBN 978-9987-9777-1-0

Where are the Doctors? Tracking Medical Doctors in Tanzania

Printed by Jamana Printers

Table of Contents

ACKNOWLEDGEMENTS

Sikika, in collaboration with the Medical Association of Tanzania (MAT), would like to acknowledge the efforts made by a team of professionals from the two organisations that conducted this study.

Special appreciation goes to MAT leadership for their guidance and facilitation and particularly for availing their time and skills during data collection, analysis and report writing. Dr. Primus Saidia, Dr. Faida Emily and Dr. Vivianne Mlawi deserve a special mention.

Furthermore, we sincerely thank members of the Human Resources for Health Department at Sikika for pioneering this study, right from the development of the concept note and data collection tools, through data collection and analysis, to writing of this report. They include Mr. Zakayo Mahindi, Dr. Kahabi Isangula, Ms. Lydia Kamwaga, Dr. Wilson Kitinya, and Mr. Joachim Mnyawami.

We would also like to thank Dr. Martins Ovberedjo and his colleagues at WHO – Tanzania, and Professor Christiane Deneke of Hamburg University of Applied Sciences for dedicating time to review and provide valuable inputs to this report, not forgetting the Consulting Editors, Mr. Abdi Sultani Muyanza, Ms. Tuma Abdallah and Dr. D. Ndoloi.

Lastly, we would like to thank all medical doctors who so generously provided information for this study and all individuals who, in one way or another, contributed to the success of this project.

Mr. Irenei Kiria
Executive Director of Sikika

Dr. Namala P. Mkopi
Former President for Medical Association of Tanzania

LIST OF ABBREVIATIONS

BUCHS	Bugando University College of Health Sciences (now the Catholic University of Health and Allied Sciences)
DMO	District Medical Officer
HCW	Health Care Worker
HKMU	Hubert Kairuki Memorial University
HRH	Human Resources for Health
HSSP III	Health Sector Strategic Plan III
HTIs	Health Training Institutions
IMTU	International Medical and Technological University
KCMC	Kilimanjaro Christian Medical College
MAT	Medical Association of Tanzania
MD	Medical Doctor
MDGs	Millennium Development Goals
MKUKUTA	Mkakati wa Kukuza Uchumi na Kupunguza Umaskini Tanzania (National Strategy for Growth and Reduction of Poverty (NSGRP)
MMAM	Mpango wa Maendeleo ya Afya ya Msingi (Primary Health Services Development Programme)
MoHSW	Ministry of Health and Social Welfare
MUHAS	Muhimbili University of Health and Allied Sciences
NGOs	Non-Governmental Organisations
PHC	Primary Health Care
PHFs	Public Health Facilities
PHSDP	Primary Health Service Development Programme (2007-2017)
PER	Public Expenditure Review
PO-PSM	President's Office - Public Service Management
PMO-RALG	Prime Minister's Office – Regional Administration and Local Government
UDOM	University of Dodoma
WHO	World Health Organisation

EXECUTIVE SUMMARY

An efficient healthcare system is of paramount importance to every country in the world. However, for such a system to be realised, there has to exist the following six building blocks: adequately trained and readily available human resources for health (HRH), well-functioning health information system, efficient service delivery, adequate medicines and medical supplies, appropriate vaccines and technologies, proper health financing and committed leadership. Human resources for health (or health workforce) is a very important block given the fact that for the entire health system to be effective, it is necessary to have knowledgeable, competent and motivated health workers.

Tanzania, one of the developing countries, is overwhelmed by shortages of skilled health workers; indeed, it is one of the 57 countries known as 'HRH-crisis countries'. The majority of health facilities in Tanzania suffer from critical health workforce challenges caused by uneven manpower distribution between urban and rural areas, poor retention schemes, low production of health workers, lack of career development programmes, and lack of motivation. As a result, the health care industry in Tanzania is now and again hit by human capital flight. Talented, creative, and highly trained employees tend to migrate either internally or externally, within and outside the medical profession, in search of greener pastures. Consequently, the fewer workers left behind in the health care system, after the said human capital flight, are left with a heavy burden of taking care of many more patients than they can handle; and this definitely leads to low productivity. Although this situation is common in all health worker cadres, it is more serious among medical doctors.

Worse still, updated information on clinical practice of health workers is lacking, making it difficult to make any intervention or devise policy to ameliorate the health workforce crisis in the country. To elucidate this problem, Sikika, in collaboration with the Medical Association of Tanzania (MAT), conducted this study to find out the whereabouts of medical graduates in Tanzania, and to determine the status of clinical practice in the country.

This was a cross-sectional study which used multiple data collection methods, and a snowball sampling method was used to locate medical graduates. Data was collected using online survey questionnaire (Survey Monkey Questionnaire), and through face-to-face interviews. Participants were contacted through their professional networks, i.e. e-groups, e-mails, and by telephone.

Data from 2,246 medical graduates was gathered and analysed using the Statistical Package for Social Sciences (SPSS). Based on the 2012 National Census, the number of doctors in Tanzania was estimated at 2,250, which could be translated as 0.5 doctors per 10,000 people.

The survey revealed that 39.6% of the tracked medical graduates were not practising clinical medicine at the time of data collection. The remaining 60.4% medical graduates, who were practising clinical medicine, were working in hospitals, NGOs, health training/research institutes, or were pursuing further studies. With regard to their jobs/occupation at the time of this research, 42.9% of graduate doctors were working fulltime in hospitals, 15.6% were pursuing further studies, 13.8% were working in NGOs, 11.9% were working in health training or research institutions, and others (15.8%) were either working in non-health businesses, MoHSW/health related firms, or had been suspended. In general, less than half of the medical graduates were working in hospitals on a fulltime basis.

Most medical doctors who responded to this survey were based in major cities and towns. Cities such as Mwanza, Dar es Salaam and Mbeya and Moshi Municipality accounted for 41.7% of the tracked graduate doctors. In such areas, as it would be expected, there are major health facilities, referral hospitals, or medical training and research institutions. Dar es Salaam alone accounted for 32.3% while the remaining regions shared 11.3% of the tracked medical graduates. More than one third (38.8%) of the tracked graduates did not have a workstation at the time of the study, while 8.2% of these graduates were residing outside the country.

Based on these findings, Sikika and MAT would like to advise the government to design strategies and make deliberate interventions that would help to produce, attract and retain an adequately qualified health workforce in the country's hospitals. Such strategies may include new regulations and incentives that would entice doctors to devote more of their time to clinical healthcare delivery. This will lessen the workload for those dedicated doctors working in hospitals on a fulltime basis.

Since a significant number of doctors reside in major towns and cities, infrastructural improvement would help transportation of patients from rural areas to designated or referral hospitals less strenuous. This would also make it easier for people to access quality services.

Regarding limited availability of records, Sikika and MAT would like to recommend for the establishment of an information system which would be able to trace the whereabouts of medical doctors and other healthcare workers and their clinical practice status right from the day they graduate. Likewise, further research should be conducted to examine factors that prompt and tempt graduate medical doctors to abandon clinical medical practice.

Sikika and MAT expect that MoHSW, President's Office - Public Service Management (PO-PSM), PMO-RALG and other healthcare stakeholders will use the findings of this study in making informed decisions and helping to maximise engagement of graduate medical doctors, to improve the quality of health services for all Tanzanians.

CHAPTER ONE: INTRODUCTION

The World Health Organisation (WHO) defines health workers as "all people engaged in actions whose primary intent is to enhance health" and considers them as people whose job is to protect and improve the health of their communities. Moreover, research and programme reports show that nearly all countries, rich and poor, face a critical shortage of competent health workers particularly in rural areas, where the need for basic care is usually enormous. The human resources for health (HRH) crisis is characterised by severe shortages of health professionals. The shortage has seriously eroded the capacity of local health systems to function effectively, efficiently and equitably in the delivery of services to the poorest members of the community.

Furthermore, HIV/AIDS is compounding the crisis by increasing the burden of service delivery on health workers and exposing them to the risk of contracting HIV. The migration of health professionals (from Sub-Saharan Africa to other regions and continents, from one African country to another, from rural to urban health facilities, and from public to private health systems in the same country) and the chronic under-investment in public sector healthcare systems are major contributing factors to the health crisis (Naicker *et al.*, 2009).

Like in other developing countries, Tanzania's health sector is understaffed and characterised by uneven distribution of healthcare workers, with rural and remote places being the most disadvantaged. It has been noted that Tanzania has the lowest per capita of highly trained health workers (physicians) in the world (Joint Learning Initiative, 2004). It has been documented that 57 African countries, including Tanzania, have a shortage of 2.4 million doctors and nurses (WHO Report, 2006). Additionally, while Africa has 25% of the global disease burden, it has only 1.3% of the world's experienced healthcare workers (Naicker *et al.*, 2009). The shortage is further compounded by low productivity, ineffective financial and non-financial incentives, poor working environment, lack of supportive supervision, poor career schemes, migration to other attractive healthcare labour markets in and outside Africa,

absenteeism and the loss of health workers due to HIV/AIDS (Munga & Mbilinyi, 2008).

On the other hand, the Health Sector Performance Profile Report (2011) shows that there were 52,637 workers in the entire health sector, for the reporting year. The report also indicates that the trends of healthcare workers prior to 2011 were 33,715 in 2005/2006; 38,527 in 2006/2007; 41,537 in 2007/2008; 44,547 in 2008/2009; and 48,637 in 2009/2010 (MoHSW, 2012). This reflects an average annual increase of about 3,730 healthcare workers.

The Human Resources for Health – Public Expenditure Review Survey (HRH PER) (2011) shows that the 11 local government authorities that were surveyed had an average of 60% of the required medical doctors (MoHSW, 2012). According to WHO, Tanzania's doctor-population ratio improved from 0.2 physicians per 10,000 people in 2006 (WHO, 2006)[1] to about 0.5 physicians per 10,000 people in 2011 (MoHSW, 2012)[2].

In 2009, Sikika carried out a survey in 103 districts of Tanzania to track deployment of various cadres of the health workforce. The HRH tracking study revealed an overall HRH gap of 54%, and a follow-up study in 2012 revealed an overall HRH gap of 49.1%. In addition, it was also discovered that some cadres were unavailable in some districts and these included medical doctors, medical technicians, pharmacists and physiotherapists. The study further established that 30 out of the 103 districts surveyed had no graduate medical doctors (Sikika, 2010).

During the 2012 doctors' strike in Tanzania, none among MoHSW, MAT, researchers or activists was able to present a correct figure of graduate medical doctors available in the country. Moreover, the extent of internal migration, as well as emigration of this scarce cadre, is not well documented. One of the complaints by the striking doctors was excessive workload and poor working conditions characterised by poor/lack of working facilities. Given the high cost involved in the training of medical doctors in Tanzania

1 http://www.aho.afro.who.int/profiles_information/images/c/c8/Tanzania-Statistical_Factsheet.pdf
2 From this ratio one can estimate the total number of doctors in the country to be around 2,250

and around the world, Sikika and MAT wanted to find out the whereabouts of graduate medical doctors, and whether they were practising clinical medicine. Sikika and MAT also wanted to establish the proportion of those who had left clinical practice for other activities. The information gathered is to be used by Sikika and other stakeholders to advocate for improved retention of graduate medical doctors and other healthcare workers, thereby enabling more people to access services offered by qualified health providers.

The study aimed at generating information on a sample of graduate medical doctors who trained within the country and those who studied abroad. It also sought to determine such doctors' workstations at the time of the study and whether they were practising clinical medicine or not.

Findings from this study are expected to establish baseline information on the number of available graduate medical doctors, their location, and their clinical practice status. This information is going to help MAT, MoHSW, PO-PSM, and development partners to understand the dynamics of the graduate medical workforce in Tanzania and the extent of its internal and external relocation. Understanding the dynamics of such medical professionals will help responsible organs formulate mechanisms to retain and attract more doctors into clinical practice.

Sikika and MAT will use the results as evidence to advocate for improved working conditions in hospitals, improved incentives for clinical practitioners and establishment of a progressive strategy by MoHSW and other bodies for tracking and documenting the number of graduate medical doctors, their whereabouts and their clinical practice status.

This chapter has reviewed relevant literature and described the significance of the study. Chapter Two describes the objectives and study methodology, while Chapter Three presents the study findings. Discussion and recommendations are presented as Chapters Four and Five.

CHAPTER TWO: STUDY OBJECTIVES AND METHODOLOGY

STUDY OBJECTIVES

The main objective of the study was to determine the status of clinical practice and the extent of internal and external migration of Tanzania's medical graduates in the year 2012.

The specific objectives of the study were to:

a) determine the clinical practice status of graduate medical doctors in Tanzania;
b) determine the job/occupation of graduate medical doctors in Tanzania;
c) identify the workstations of graduate medical doctors in Tanzania; and
d) determine the extent of internal[3] and external migration of medical doctors in Tanzania.

METHODOLOGY

This was a cross-sectional study conducted between August and October 2012, to examine the whereabouts, employment, workstation and clinical medicine practice status of graduate medical doctors in Tanzania.

Various methods of data collection were employed to capture information from as many medical doctors as possible. First, contact information of medical graduates was extracted with the support of Registrars and Admission Officers of relevant universities. Second, medical doctors were tracked through relevant social media, mailing lists, MAT pages, websites, and university alumni associations, among others. Snowball sampling was also used on individual doctors found in health facilities and other institutions, who volunteered information regarding the whereabouts of their fellow doctors. Data of 2,246 medical doctors who responded to questionnaires was available for analysis. Given the fact that most of the doctors were traced in e-forums, e-questionnaires were deployed using 'survey monkey questionnaires'. Direct interviews were also conducted and doctors' networks, e-mails and phone numbers were utilised. Sikika's HRH department staff together with

3 Internal migration is regarded as not practicing medicine and/or not working fulltime in hospital

two researchers from MAT collected data from the target sources.

Data was analysed using the Statistical Package for Social Sciences (SPSS) software and the output was summarised and presented in tables and figures.

This study was part of the HRH Enrolment Study for which written permission had been obtained from the Ministry of Health and Social Welfare (MoHSW). Prior to data collection, a joint introduction letter was prepared for researchers who were to conduct physical visits. For tracking purposes, the aim and objectives of the study (which had been put in writing) were communicated to target respondents who had the option to withdraw from the study anytime they so wished. MAT keeps all research data with identifying information of medical doctors, while Sikika maintains the non-identifying data.

CHAPTER THREE: STUDY FINDINGS

As indicated earlier, the study involved 2,246 medical doctors. The total number of doctors was calculated from the doctor-to-population ratio of 0.5 doctors per 10,000 people (MoHSW, 2012), which, basing on the country's total population of 44,928,923 (NBS, 2012), gave an estimated number of 2,250 medical doctors.

Table 1: Tracked graduate medical doctors with their respective medical training institutions

University	Tracked medical doctors			
	Female	Male	TOTAL	%
BUCHS	59	88	147	6.5
HKMU	8	10	18	0.8
IMTU	5	3	8	0.4
KCMC	159	256	415	18.5
MUHAS	439	1,178	1617	72.0
MD who graduated abroad	15	26	41	1.8
TOTAL	**685 (30.5%)**	**1,561 (69.5%)**	**2,246**	**100**

A large proportion of the tracked doctors were male (69.5%) and nearly three quarters (72.1%) were MUHAS graduates, followed by KCMC graduates (18.4%). IMTU and HKMU had the least number of tracked medical doctors.

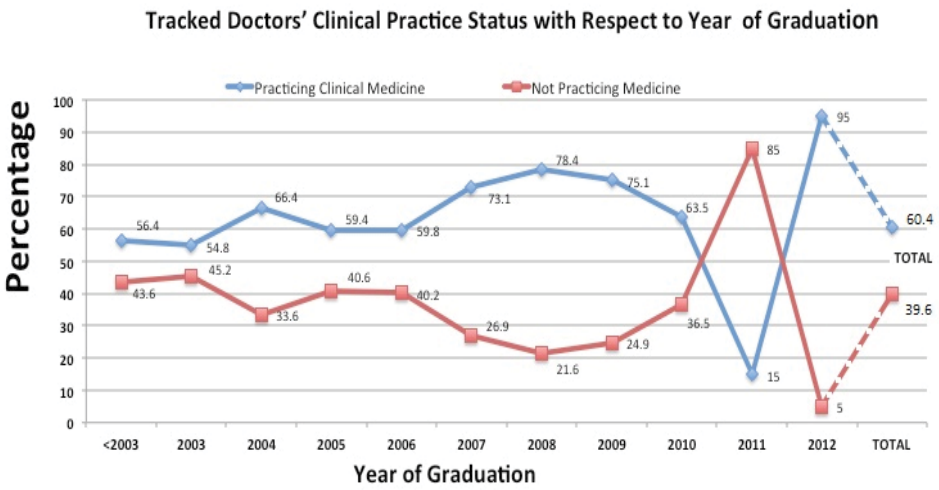
Clinical medicine practice status

Table 2: Clinical medicine practice status of tracked graduate medical doctors

		Sex				Total (%)	
		Female (%)		Male (%)			
Practicing clinical medicine	**Yes**	400	(58.5)	956	(61.2)	1,356	(60.4)
	No	285	(41.5)	605	(38.8)	890	(39.6)
Total		**685**		**1,561**		**2,246**	

Of all tracked medical doctors in this study, 39.6% were not practising clinical medicine. There was a small difference in percentage by gender between the proportions of those who were practising medicine and those who were not.

Figure 1: Tracked graduate doctors' clinical practice status with respect to year of graduation



Almost all (95%) of the 2012 graduates were practising medicine (internship) at the time of the study. Nearly a half (45.2%) of the 2003 graduates were not practicing clinical medicine, while two thirds (66.4%) of the 2004 graduates and more than three quarters (78.4%) of the 2008 graduates were practicing clinical medicine. Most (85%) of the tracked medical doctors who had earned their degrees in 2011 were not practising clinical medicine at the time of the

study. This might be linked to the strike by doctors that took place in 2012 during which time the 2011 graduates were doing their internship. Most had been suspended in the wake of the strike.

Table 3: Tracked graduate doctors' job in relation to clinical medicine practice status

Current job	Practice status				Total	(%)
	Yes	(%)	No	(%)		
Fulltime in Hospital	951	(98.6)	13	(1.4)	964	(42.9)
NGOs	33	(10.6)	276	(89.4)	309	(13.8)
Further Studies	287	(82)	63	(18)	350	(15.6)
Health Training/Research Institutions	76	(28.4)	191	(71.5)	267	(11.9)
Non-Health Related/Business	0	(0.0)	16	(100)	16	(0.7)
Health Related Sector/MoHSW	9	(19.5)	37	(80.5)	46	(2.0)
Not working/Suspended	0	(0.0)	294	(100)	294	(13.1)
Total	**1,356**	**(60.4)**	**890**	**(39.6)**	**2,246**	**(100)**

Less than a half (42.9%) of the tracked medical doctors were working fulltime in hospitals. About 15% of the doctors were pursuing further studies and 13.8% were working in NGOs. Most of the medical doctors who were working in NGOs (89.4%), health training/research institutions (71.5%), and health-related sector/MoHSW (80.5%) were not practising clinical medicine. Likewise, a total of 13 doctors (1.4%) who were working fulltime in hospitals were not practising clinical medicine.

Workstation of tracked medical doctors

Table 4: Graduate medical doctors' workstation and clinical medicine practice status

Workstation	Practice medicine				Total	(%)
	Yes		No			
Dar es Salaam	484	(66.7)	241	(33.2)	725	(32.3)
Mbeya	22	(46.8)	25	(53.2)	47	(2.1)
Kilimanjaro	47	(92.1)	4	(7.9)	51	(2.3)
Mwanza	77	(68.1)	36	(31.9)	113	(5.0)
No Workstation	441	(50.7)	430	(49.3)	871	(38.8)
Other Regions	191	(74.9)	64	(25.1)	255	(11.3)
Outside Tanzania	94	(51.1)	90	(48.9)	184	(8.2)
Total	**1,356**		**890**		**2,246**	

While almost three quarters (74.9%) of doctors tracked in regions other than Dar es Salaam, Mbeya, Kilimanjaro and Mwanza were practising clinical medicine, only two-thirds (66.7%) of those living in Dar es Salaam were practising clinical medicine. Dar es Salaam alone accounted for 32.3% of the tracked medical doctors compared to other regions that accounted for 11.3%. More than one third (38.8%) of the tracked doctors did not have a workstation at the time of the study. For doctors residing outside the country, the number of those practising medicine exceeded those who were not practising, by 2.2%.

Table 5: Location of tracked graduate medical doctors residing outside Tanzania

Country/Region	Female	Male	Total
Africa			
Southern Africa			
Botswana	3	6	9 (4.9)
Namibia	2	4	6 (3.3)
South Africa	6	6	12 (6.5)
Zimbabwe		3	3 (1.6)
Sub-total	**11**	**19**	**30 (16.3%)**
Eastern Africa			
Kenya	5	11	16 (8.7)
Uganda	6	32	38 (20.7)
Rwanda		2	2 (1.1)
Sub-total	**11**	**45**	**56 (30.5%)**
Rest of Africa			
Sudan		2	2 (1.1)
Sub-total Africa	**22**	**66**	**88 (47.8%)**
Middle East and India	2	2	4 (2.2%)
Far East (Japan, China, Korea, Singapore)	6	2	8 (4.3%)
Europe (Germany, Netherlands, Sweden, Norway, UK and Russia)	8	19	27 (14.7%)
North America	11	27	38 (20.7%)
Australia and New Zealand	3	3	6 (3.3%)
Unknown Location	4	9	13 (7.1%)
Grand Total	**56**	**128**	**184**

Table 5 shows the location of the tracked medical doctors who were abroad during data collection. A total of 88 (47.8%) Tanzanian doctors who responded were operating in other African countries. Doctors that were operating in East African countries (other than Tanzania) accounted for 30.5%, while more than one-third (35.4%) were living in North America and Europe.

CHAPTER FOUR: DISCUSSION

In this study, as already pointed out, 2,246 medical doctors were tracked, and only about one third of them were female. A previous study in Tanzania also had shown a male-dominance scenario in medical personnel, particularly among clinical and medical officers (Exavery *et al.*, 2013). The gender-based skewness might be one of the factors preventing women from accessing healthcare, as they might prefer their female counterparts to male doctors. This study also found out that doctors who had graduated from Muhimbili University of Health and Allied Sciences (MUHAS) made up more than two-thirds of the respondents.

MUHAS is the oldest medical college, and has a comparatively larger intake of medical students than other medical schools in the country.

Clinical medicine practice status

On the whole, 39.6% of the tracked medical doctors were not practising clinical medicine, of whom, female doctors accounted for a higher proportion (41.6%) compared to their male counterparts (38.9%). This is a significantly higher proportion as the number is also included when calculating the physician-population ratio.

In other words, although doctors are available in the country, they do not perform the actual clinical work they are expected to do. These findings also reflect what had been found in a previous study that after five years in medical school; only 8% of medical students would be motivated to work as clinicians (Leon & Riise, 2010). In the said study, two-thirds of the respondents said they felt lowly motivated, and only 25% could retain their initial level of motivation.

When these findings are put together, it is evident that the low motivation of the medical doctors is a result of a cumulative effect which starts as early as during their medical training. With training cost in mind, the implications of producing less motivated doctors in a country with poor resources and inadequate supply of doctors are very serious. It is also probable that many doctors are leaving the health sector, or delivering lower quality services, because of low motivation. If this is the case, as Leon and Riise (2010) opines, invaluable resources are going to waste.

Considering that about 40% of the tracked doctors are not practising clinical medicine, it becomes necessary to use a lot of resources to produce a large number of doctors to compensate for the attrition by those who choose to relocate, and to take care of the effects of poor performance by those who remain behind but whose working morale is low. This also means that the duration expected to fill the gap of the actual number of doctors needed to provide the needed care will be longer than planned, and probably unknown (MoHSW – HRHSP, 2008). This is because, since a sizable number of graduates do not join health service delivery as a career of choice and instead choose to pursue other occupations, the actual projections should take this into account. It is therefore important to find out the possible causes of career abandonment and address them in order to reduce the wastage of this expensively trained medical workforce.

In an earlier study by Munga and Mbilinyi (2008), it has also been reported that Tanzania is unable to attract and retain an adequate and qualified health workforce necessary to effectively implement health interventions and reverse the negative health status trends thus achieve the Millennium Development Goals. A study among final year medical students mentioned some of the reasons for the demotivation of the medical career as: doctors' too low salary/income (54%), poor working conditions (15%) and heavy workload (9%) (Leon & Riise, 2010). Other reasons mentioned in this study were poor learning environment, intimidation and frustration by lecturers, too long courses, irresponsible government, and general tension in medical schools (*ibid*).

The reasons listed above might not be exhaustive to explain why medical graduates refuse to practise clinical medicine after five years of medical studies and one year of internship. This scenario underscores the need for a qualitative study to document factors that induce doctors to abandon the clinical medicine career. The findings will be a valuable input in efforts to reduce resource wastage.

Comparing the status of clinical practice to year of graduation (among 2003 graduates [54.8%], 2004 graduates [66.4%] and 2008 graduates [78.4%]), an interesting scenario emerges worth considering. There might be different factors among different groups of graduates that push them away from

clinical practice. An in-depth study with qualitative description of such factors would help to highlight the differences in medical practice status between one batch of graduates and another.

In clinical medicine practice, a slightly higher percentage of female doctors were not practising compared to male doctors (41.6% vs. 38.9% respectively). Among other factors that might account for this state of affairs, female doctors may be affected more by their roles as mothers and wives. Clinical work has a lot of demands, and one has to work long hours, has to be on call and work night shifts, while at the same time caring for their own children and babies. Given such excruciating tasks, female doctors are more likely to change their clinical careers for less demanding jobs or other fields within medicine. It was found in a different study that women are more likely to forego their job responsibilities or make a career change for the benefit of their families, with the most common adjustment being a reduction in hours at the workplace (Verlander, 2004). In a separate study, a higher number of men than women completed their specialist training in surgery. Factors such as heavy workload and 'nights on call' made it difficult for women to combine childcare and work, and this forced them to change to other specialities (Gjerberg, 2002).

Job/Occupation of tracked medical doctors

Less than a half (42.8%) of the tracked medical doctors worked fulltime in hospitals. However, not all of these were practising clinical medicine. Some of them were engaged in managerial/leadership roles. Although this is critical to organisational success (Stoller, 2008; Chadi, 2009), it can also mean wastage of skills (Dovlo, 2005).

Hospitals are critical service provision points; therefore, having less than a half of available doctors working in hospitals is an alarming situation, and this affects the quality of medical care. It denies citizens the right to be attended to by qualified medical personnel. This has implications on the workload of the remaining doctors who are left to attend unmanageable numbers of patients with all sorts of problems. As found out by the study mentioned earlier by Leon and Riise (2010), too heavy workload was one of the causes identified by medical students as demotivating trainees from pursuing a medical career.

The fact that 15.5% of the tracked medical doctors were undertaking further studies correlates with Leon and Riise's (2010) findings where the majority of medical students wished to pursue medical specialisation as early as only 2.1 years after graduation. This could also correlate with the efforts of the government to train enough specialists to serve in Regional Hospitals which are usually converted into Regional Referral Hospitals. However, not all those pursuing further studies go into clinical practice after graduation; a handful of these graduates migrate to other jobs hence further increasing the deficit. When this happens, the enormous resources that would have been spent to train them at undergraduate and post-graduate levels would have gone to waste. Therefore, instead of continuing to waste more resources, there is a need to find out why most medical doctors quit practising clinical medicine and seriously address the contributing factors, to ensure efficient utilisation of these human resources.

Location/Workstation

Major cities of Mwanza, Dar es Salaam, Mbeya and Moshi Municipality accounted for 41.7% of all the tracked graduate doctors. This can be explained by the fact that tertiary level hospitals are found in these major urban areas, and it is a fact that these hospitals require more doctors than those in the districts and other lower level facilities (MoHSW, 1999). The distribution of this kind can also be explained by the fact that in major urban areas there are more institutes (training/research and NGOs), which explains the noted high number of doctors in these places. Following the observation that more than two-thirds of medical doctors wish to pursue further studies (Leon & Riise, 2010), the implications are that when these doctors are pursuing their studies, they would be located mostly in these urban areas and secondly, after graduation as specialists, they would be expected to serve in regional referral, specialised, or consultant/national hospitals most of which are found in the same areas.

As noted earlier, Dar es Salaam City had 32.3% of all tracked medical graduates; reflecting the actual picture of the area's population and the fact that more medical graduates are needed to provide services in the city. On the other hand, the use of electronic media to track and collect data could have provided an infrastructural advantage for more medical doctors in Dar es Salaam to easily respond to the study.

The fact that three quarters (74.9%) of the doctors found in other regions were practising medicine is a relief since most of them deliver services to the needy citizens. However, it is important to put in place a system that will ensure that the doctors are motivated and that they are not overworked unnecessarily.

Doctors residing outside Tanzania accounted for 8.2% of all the tracked medical doctors. This percentage, which reflects the rate of external migration, was a mixture of those pursuing further studies, some working in clinical practice and others working in other sectors.

Those who are practising clinical medicine or working in other sectors should be investigated in some other research so as to inform policy makers and other stakeholders about possible reasons that prompt these doctors to reside and work outside the country. As pointed out earlier, this situation contributes to brain drain and particularly worsens the current HRH shortage. Identifying these reasons will help to restructure the country's health system and curb the factors that make the doctors emigrate and hence reduce, among other things, brain drain and wastage of investment (Munga & Mbilinyi, 2008; Naicker *et al.*, 2009; Mills *et al.*, 2011).

With the HRH shortage exacerbated by internal and external migration, Tanzania's progress towards the achievement of the Millennium Development Goals will be greatly affected, and without changing the trend, it is unlikely that the country will achieve the MDGs by 2015, Vision 2025 and MKUKUTA.

Limitations of the study

The study did not involve foreign doctors working as experts or volunteers in NGOs and hospitals (especially FBO). Further, the study did not enquire about the age of respondents, which would have been helpful in estimating the trend of retirement (duration of service provision). Again it was not designed to capture the causes prompting doctors to abandon their career as medical practitioners.

CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS

CONCLUSION

The study exposed unfavourable trends in utilisation of scarce human resources for health in Tanzania. The fact that 39.6% of the tracked medical doctors were not practising clinical medicine, it is an indication that there was, and still is, a serious human resources problem in the medical field.

This research, which entailed tracking medical doctors, revealed that less than half of Tanzania's medical doctors were working fulltime in hospitals and nearly half of them were employed by either health training/research institutes or NGOs or were pursuing further studies. Also, not all of those who were working fulltime in hospitals were practising clinical medicine.

Furthermore, the study established that most doctors in Tanzania, at the time, were based in major towns/cities. This situation is explained by the nature of the country's health system, in which most doctors are mainly found in district, regional, specialised or consultant/national hospitals.

The study has also revealed that internal migration (medical doctors working in NGOs, etc.) is greater than external migration; the latter stands at 8.2% of the tracked medical doctors. Apart from human capital flight, the emigration of medical doctors also means loss of the resources used in training them.

RECOMMENDATIONS

i) The government, through MoHSW, PO-PSM and PMO–RALG in particular, needs to work out strategies to attract and retain an adequate size of qualified health workforce especially in service delivery points (hospitals) and in training institutions to effectively implement health interventions, reverse the negative health status trends, and ultimately achieve set goals at the national

and international levels. This could be realised through improved financial and non-financial incentives, enhanced work conditions and availability of adequate medical supplies and equipment.

ii) A new system, rules and regulations should be established to:
- influence doctors in other jobs/careers to devote some of their time in healthcare delivery so as to lessen the workload of those working fulltime in hospitals; and
- have mandatory term of service provision (practice) after internship as a condition for one to get full registration.

iii) Since most doctors reside in major towns/cities, there is a need for improved transportation infrastructure as well as enhanced and functional referral system that will enable the poor citizens in rural areas to get quality health care and benefit from the services of the urban-based medical personnel.

iv) In order to ensure more doctors work in rural/remote areas, there is a need for special arrangement to provide incentives for doctors willing to stay and work in those areas. The incentives could be in the form of guaranteed scholarships for postgraduate studies after a certain period in the rural areas, free housing, hardship allowance and priority consideration for short-term training opportunities.

v) Information systems (HRHIS and TIIS) need to be improved to facilitate availability of up-to-date information on the whereabouts of medical doctors and other healthcare workers, and their clinical practice status.

vi) Medical training institutions should reorganise their system of instruction in order to build interest, among students, in medical practice and so produce graduates who are ardent clinical practitioners.

vii) MoHSW should recognise the role of professional associations and other stakeholders in HRH development and collaborate with them in mapping, tracing and promoting training, employment, deployment and retention of medical practitioners so as to build a sense of professional ownership among its members, and hence ensure quality healthcare provision to Tanzanians.

viii) Further research should be undertaken to establish the causes that make doctors avoid clinical practice, as that was beyond the scope of this study. Moreover, those residing outside the country should be contacted to share their experiences; as this kind of information would be very useful for decision makers, policy makers and stakeholders.

REFERENCES

Dolvo, D. (2005). Wastage in the health workforce: Some perspectives from African countries. *Human Resources for Health*, 3:6 doi:10.1186/1478-4491-3-6. http://www.human-resources-health.com/content/3/1/6

Exavery, A., Lutambi, A. M., Wilson, N., Mubyazi, G. M., Pemba, S., & Mbaruku, G. (2013). Gender-based distributional skewness of the United Republic of Tanzania's health workforce cadres: A cross-sectional health facility survey. *Human Resources for Health,* 11:28. http://www.human-resources-health.com/content/11/1/28)

Gjerberg, E. (2002). Gender similarities in doctors' preferences and gender differences in final specialisation. *Soc Sci Med.*, 54(4), 591-605.

Leon, B., & Riise, K. (2010). Wrong schools or wrong students? The potential role of medical education in regional Imbalances of the health workforce in the United Republic of Tanzania. *Human Resources for Health, 8:3.*

Mills, E. J., Kanters, S., Hagopian, A., Bansback, N., Nachega, J., Alberton, M., Au-Yeung, C. G., Mtambo, A., Bourgeault, I. L., Luboga, S., Hogg, R. S. & Ford, N. (2011). *The financial cost of doctors emigrating from Sub-Saharan Africa: Human capital analysis,* 343:d7031 doi: 10.1136/bmj.d7031

MoHSW (1999). *Staffing levels.* URT, MoHSW.

MoHSW (2007). *Human resource for Health Strategic Plan 2008-2013*. URT.

MoHSW (2007). *Primary Health Sector Development Plan 2007-217*. URT. http://www.moh.go.tz/documents/FINAL%MMAM%2026.11.2007.pdf

MoHSW (2008). *The Health Sector Strategic Plan III (2009-2015)*. URT.

MoHSW (2012). *The Health Sector Performance Profile 2011*. URT.

Munga, M. A., Mbilinyi, D. R. (2008) Non-financial incentives and retention of health workers in Tanzania: Combined evidence from literature review and a focused cross-sectional study. EQUINET Discussion Paper Series 61. NIMRI, ECSA-HC, EQUINET: Harare.

Naicker, S., Plange-Rhule, J., Tutt, R. C., Eastwood, J. B. (2009). Shortage of health care workers in developing countries. *Africa Ethnicity and Disease*, 19 s1-60-64. http://108.28.177.19/journal/19-1s1/ethn-19-01s1-60.pdf

Nicholas, C. (2009). Medical leadership: Doctors at the helm of change. *McGill Journal of Medicine,* http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2687916/pdf/mjm12_1p52.pdf

Robinson, R. (2007). The costs and benefits of health workers migration from Eastern and Southern Africa (ESA): A literature review. EQUINET Discussion Paper Series 49. http://www.ecsahc.org/downloads/Costs%20and%20benefits%20of%20Health%20Worker%20Migration.pdf

Sikika (2011). *HRH tracking study 2010*. http://www.sikika.or.tz/en/cms/functions/files/ publication69.pdf

Sikika (2012). *HRH tracking study 2012*. (In press)

Sikika (2012). *Moral and ethical dilemma during doctors strike in Tanzania: Viewpoint*. http://www.sikika.or.tz/en/publications/read.php?pid=&uid=284

Stoller, J. K. (2008). Developing physician-leaders: Key competencies and available programmes. *The Journal of Health Administration Education.*

Verlander, G. (2004). *Female physicians: Balancing career and family. Academic Psychiatry*, 28:4, http://ap.psychiatryonline.org. http://www.med.upenn.edu/ gastro/documents/BalancingCareerandFamily.pdf

WHO (2006). *Health workers: A global profile*. Chapter 1. http://www.who.int/whr/ 2006/06_chap1_en.pdf

WHO (2008). *World health statistics*. http://www.who.int/gho/publications/world_health_statistics/EN_WHS08_Full.pdf

P.o.Box 701, Dar Es Salaam
Tel: 0222151835
Fax: 0222153514
E-mail: info@mat-tz.org
Website: www.mat-tz.org

APPENDIX

P.o.Box 12183, Dar Es Salaam
Tel: 0222666355/57
Fax: 0222668015
E-mail: info@sikika.or.tz
Website: www.sikika.or.tz

SURVEY MONKEY QUESTIONNAIRE

MD Tracking Study 2012

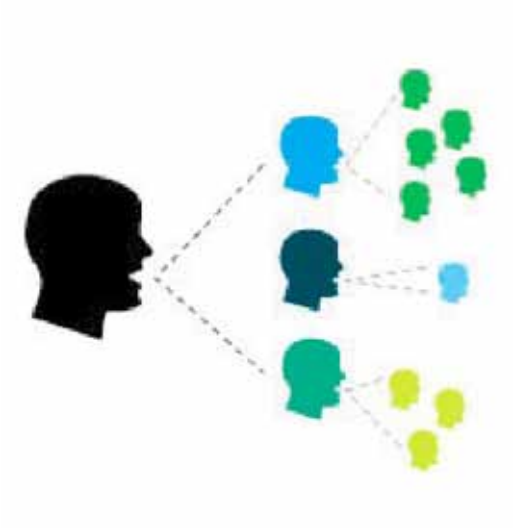
NAMES/ ABBREVIATIONS	Gender	Year of Graduation	University (MD)	Practising Clinical Medicine? YES/NO	If Not Practising Clinical medicine, Current Job or status	Location of Practice/ Work/ Studies/ Business	MCT Registration status	Any other Relevant Information

SNOWBALL SAMPLING METHOD

Snowball sample: When interviewing members of a population, one can ask the interviewees to suggest names of other individuals who could be asked to give information or opinion on the topic. The new individuals are interviewed and later asked to suggest further names. This process is repeated until the required number of informants are obtained and interviewed.

Snowball sampling is a good method for obtaining informants, especially for populations that are neither well-confined nor well-enumerated.

This method can be improved by starting the snowball chain from several different people, perhaps from different social groups – a form of stratified sampling. (http://www2.uiah.fi/projects/metodi/152.htm accessed on 01/10/2013 at 11:35)



Source: http://www.rockpaperink.com/content/article.php?id=1039
Image illustrating snowball data collection method

The Medical Association of Tanzania
P.o.Box 701, Dar Es Salaam
Tel: +255 (0) 22 2151835 Fax:+255 (0) 22 2153514
E-mail: info@mat-tz.org Website: www.mat-tz.org

MAT seeks to promote the medical and allied sciences, to maintain the honour and interests of the medical professions and to uphold a high standard of medical ethics and conduct among its members

Sikika works to ensure equitable and affordable quality health care services through health systems and social accountability at all levels of government

ISBN 978-9987-9777-1-0

Sikika

House No. 69
Ada Estate, Kinondoni
Tunisia Road
Waverley Street
P.O. Box 12183
Dar es Salaam, Tanzania
Tel: +255 22 26 663 55/57

SMS: 0688 493 882
Fax: +255 22 26 680 15
Email: info@sikika.or.tz
Website: www.sikika.or.tz
Blog: www.sikika-tz.blogspot.com
Twitter: @sikika1
Facebook: Sikika Tanzania

House No. 340
Kilimani Street
P.O. Box 1970
Dodoma, Tanzania
Tel: 026 23 21307
Fax: 026 23 21316