

**SOURCE COUNTRY PERSPECTIVES ON THE MIGRATION OF HEALTH
PROFESSIONALS FROM KENYA: A SYSTEMS THINKING APPROACH**

By

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ABSTRACT

Overview: A global shortage of over 7.2 million health workers poses a threat to service delivery particularly in sub-Saharan Africa. Sub-Saharan Africa bears a quarter of the global burden of disease; yet, it only has three percent of all health workers. Maldistribution and migration both to urban and international destinations pose persistent challenges to service delivery particularly to rural and remote populations. In Kenya, the health human resources are mostly concentrated in urban areas, and in some cases as high 70% of the health workers are serving only 20% of the population. Literature to date, particularly in the context of Kenya, has focused on doctors and more recently nurses. There has been a gap in analysis in exploring mid-level cadres such as clinical officers, a cadre of non-physician clinicians.

Research objectives: The objectives of the research were to: 1) conduct a contextual analysis of human resources for health in Kenya; 2) understand the migration perspectives of Kenyan health professionals including doctors, nurses and clinical officers through an online survey; 3) explore the role of mid-level health worker cadre of clinical officers as a promising practice for Kenya.

The thesis is presented in three papers congruent with the three research objectives. I interrogated these areas at a macro, meso and macro level using systems thinking theory.

Findings: The first paper found significant developments in the policy context of managing health professionals in Kenya all of which have improved the working conditions for health professionals. International migration was found to have decreased over the past decade and was not deemed be a policy priority by government and development partner stakeholders. Health professional representatives, on the other hand, asserted that they continue to be disgruntled with the current situation and would not hesitate to migrate given the opportunity. The second paper found that the factors that discourage health professionals from staying in Kenya are similar to those available in the literature and include: dissatisfaction with remuneration, governance, working conditions and living conditions. Among health professionals considering migration, few had made short-term plans to leave. Family ties and fear of the

unknown were found to be strong factors for continuing to work as health professionals in Kenya. Job security was found to be high in the government while recruitment agencies were not found to play a significant role in migration decisions of health professionals. The third paper found that there was general support for the scale of up clinical officers to enhance the Kenyan health workforce. Barriers to scale-up included resistance from medical doctors, who felt that clinical officers were not competent enough to handle complicated cases, and a lack of employment opportunities given a surplus of about 3,000 unemployed clinical officers in Kenya, who could potentially fill in the health workforce gaps.

Conclusion: Overall policy developments have been implemented since 2007 presenting a promising future to the management of human resources for health (HRH) in Kenya. Although few health professionals are making concrete steps to migrate out of Kenya they continue to be dissatisfied with the current living and working conditions. Maldistribution and overall shortages of health professionals continue to hamper service delivery to vulnerable rural populations. Mitigating factors include the potential of scaling up the clinical officer cadre particularly through the surplus of 3000 unemployed clinical officers, a process that requires sufficient political and professional will. A holistic multi-level approach to health system planning is crucial to ensure that any new investments are well coordinated and involve an overall scale-up of health professionals.

Key words: migration, human resources for health, Kenya, health systems, systems thinking, population health

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“But those who wait on the Lord shall renew their strength; they shall mount up with wings like eagles, they shall run and not be weary, they shall walk and not faint.” Isaiah 40:31 (NKJV)

For Etsé
Josiah, Elias and Eliora

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ABBREVIATIONS

ACCRONYM	FULL NAME
CHAK	Christian Health Association of Kenya
DANIDA	Danish International Development Agency
DfiD	Department for International Development (UK)
EQUINET	Research Network on Equity in Health in Southern Africa
FBO	Faith-Based Organization
GHWA	Global Health Workforce Alliance
GLUK	Great Lakes University of Kenya
HIV/AIDS	Human Immunodeficiency Virus and Acquire Immune Deficiency Syndrome
HRH	Human Resources for Health
JICA	Japan International Co-operation Agency
JLI	Joint Learning Initiative
KEMU	Kenya Methodist University
KI	Key Informant
KMPDU	Kenya Medical Doctors, Pharmacists and Dentists Union
KMTC	Kenya Medical Training College
KNBS	Kenya National Bureau of Standards
MDGs	Millennium Development Goals
MOH	Ministry of Health
MOHProf	Mobility of Health Professionals Study
MOMS Kenya	Ministry of Medical Services Kenya
MPHS Kenya	Ministry of Public Health and Sanitation Kenya
NCK	Nursing Council of Kenya
NCK	Nursing Council of Kenya
NGOs	Non-governmental Organizations
SCoP	Source Country Perspectives on the Migration of Highly Skilled Health Personnel Study
SSA	Sub-Saharan Africa
SWOT	Strengths, Weaknesses, Opportunities, Threats
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
USAID	United States of America International Development Agency
WHA	World Health Assembly
WHO	World Health Organization

Chapter 1: Introduction

GENERAL INTRODUCTION

Human resources for health (HRH) are a key component of health service delivery to populations according to the World Health Organization (WHO) (2014). A global shortage of over 7.2 million health workers¹ poses a threat to service delivery particularly in sub-Saharan Africa (WHO, 2006; WHO, 2014b; WHO/GHWA, 2013). Sub-Saharan Africa bears a quarter of the global burden of disease but has only three percent of all health workers (WHO, 2007a; WHO, 2014b). Within countries, maldistribution and migration both to urban and international destinations pose persistent challenges to service delivery particularly to rural and remote populations (Connell, 2008; Connell, Zurn, Stilwell, Awases, & Braichet, 2007). In Kenya, the focus country of this thesis, 78% of the population is rural-based but the health human resources are mostly concentrated in urban areas. In some cases, as high as 70% of the health workers are serving only 20% of the population (MOMS Kenya, 2008; MPHS Kenya, 2008). When the Global Health Workforce Alliance (GHWA) bemoans that one billion people worldwide have no access to health care, indeed, have never seen a health worker in their life, they are referring to areas like rural Kenya. Access to skilled service providers is a key social determinant of health and is linked with various health outcomes throughout the life course (CSDH, 2008; WHO, 2014b). A lack of skilled birth attendants, for example, is associated with high rates of maternal and infant mortality, particularly in SSA (WHO, 2014b; World Bank, 2009).

Globally, discourse has centered on managing migration flows and destination country policies, including the international recruitment of health professionals. There are growing research efforts to determine the local, national, and global solutions to address the current human resources crisis (Dal Poz,

¹ The World Health Organization defines **health workers** as all people primarily engaged in actions with the primary intent of enhancing health. WHO. (2006). Working Together for Health. World Health Report Geneva: WHO. p. xvii.

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Gupta, Quain, & Soucat, 2009). Knowledge gaps persist around source country perspectives on the context of internal and international migration, as well as the perspectives of health professionals on shortages and migration.

Kenya provides a unique 'source country' context to study HRH and the role of migration given that it has previously faced high levels of migration of health professionals but has more recently had positive developments in domestic health policy. This is further discussed in the second chapter of the thesis. Literature to date particularly in the context of Kenya has focussed mostly on doctors and more recently nurses (Adano, 2008; Gross et al., 2011; Mbindyo, Blaauw, Gilson, & English, 2009; Mwaniki & Dulo, 2008; Ndetei, Khasakhala, & Omolo, 2008; Pust, Dahlman, Khwa-Otsyula, Armstrong, & Downing, 2006). There has been a gap in analysis in exploring what it would take to scale-up mid-level cadres such as such as clinical officers so as to mitigate HRH shortages, particularly in the Kenyan context. Clinical officers are mid-level health personnel who offer a wide range of medical services – curative, preventive, promotive and rehabilitative -- in all parts of Kenya and in other sub-Saharan African countries (KMTC, 2010). They supplement the work of medical doctors at all levels of healthcare, from health centers where they are in charge to district and provincial hospitals to referral teaching hospitals and have been a part of the Kenyan health system since the early 1900s (KMTC, 2010).

Although a handful of studies explore this mid-level cadre specifically, there is a dearth of analysis around the possibility of scaling up clinical officers to address the current shortages of HRH (Mbindyo, Blaauw, & English, 2013; Thaler A et al., 2013; Wachira BW, Wallis LA, & Geduld H, 2012). There has also been a gap in policy analysis regarding options such as task-shifting particularly the use of non-physician clinicians and nurses. It is in this context that this doctoral research was conducted. This thesis helps to fill the knowledge gap around Kenyan HRH by elucidating the nuances in the HRH context in Kenya, exploring

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the migration perspectives of health professionals and proposing promising solutions to address current shortages of health professionals from Kenya.

This introductory chapter explores the literature on HRH and migration prefaced by an orienting theoretical framework. These discussions are followed by a description of the Kenyan context, the research objectives, parallel and pilot research, the methodology implemented in the three phases of the research, and the ethical considerations and approvals obtained in order to conduct the research. The systems thinking approach, an approach which innovatively breaks down a complex context such as Kenya and examines the key factors at a national, intermediate and local level both in terms of individuals and the policy context that defines the context is employed.

The contribution of this research to the field of population health is that it allows for an analysis of HRH that goes beyond addressing individual factors, to explore the impact of shortages, maldistribution, internal and international migration on health service delivery and health outcomes of the population. As such the approach I propose allows for an inquiry into the context, perspectives of key stakeholders and health professionals that enrich an understanding of the factors that influence that context, and promising solutions that take into account the various actors and factors necessary for ultimately improving the overall health of the population.

THEORETICAL CONTEXT AND CONCEPTUAL FRAMEWORK

Theoretical Considerations: A Systems Thinking Approach

I apply a systems thinking approach to understanding HRH in Kenya. Systems thinking places high value on understanding the context and looking for connections between parts, actors and process of the system (WHO, 2009). It is an approach to problem solving that views problems as part of a wider dynamic system. Systems thinking goes beyond reactions to present outcomes or events, and demands a deeper understanding of linkages, relationships, interactions and behaviours among the elements that

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characterize an entire system. Some of the key characteristics of systems are that they are self-organizing, constantly changing, tightly linked, governed by feedback, non-linear, resistant to change and often counter-intuitive (WHO, 2009). Systems thinking represents a paradigm shift from traditional ways of conceptualizing health care, to one that incorporates a broader definition of the health system, defined by the WHO as comprising:

“...all organizations, people and actions, whose primary intent is to promote, restore or maintain health. This includes efforts to influence determinants of health as well as more direct health-improving activities. A health system is therefore more than the pyramid of publicly owned facilities that deliver personal health services. It includes for example, a mother caring for a sick child at home; private providers; behavior change programs; vector-control campaigns; health insurance organizations; occupational health and safety legislation. It includes inter-sectoral action by health staff, for example, encouraging the ministry of education to promote female education, a well-known determinant for better health.” (WHO, 2007b).

The above definition of the health system is holistic, encompassing the social determinants of health and including various actors at multiple levels. The WHO health system framework describes six clearly defined building blocks that constitute a complete health system: service delivery, human resources, medicines and technologies, governance, information and financing (WHO, 2009). The interconnectedness of these components is represented in Figure 1.1 below with people at the center of the model.

Figure 1.1: WHO Systems Thinking Interconnectedness (WHO 2009, p. 31)



Push, Pull, Stick and Stay Analysis

Discourse on the mobility of health professionals often discusses “push” and “pull” factors. This perspective is limiting as it only explores factors that encourage out-migration and factors that incentivize health professionals to leave. Pillay (2007) developed a conceptual framework that has at the core the ‘brain drain’ from source country to recipient country, and that also describes the multiple forces that influence out-migration of African health professionals. Pillay adds two other levels of analysis to those push and pull forces: stick and stay factors. Pillay’s framework has been expanded upon by the Research Network on Equity in Health in Southern Africa² (EQUINET) (EQUINET, 2007). The concept of the push, pull stick and stay factors was used in the Mobility of Health Professionals (MOHProf), a European-Union funded study that sought to understand the factors influencing the migration of health professionals between source and European Union destination countries (Tjadens, Weilandt, & Eckert, 2012). Kenya was one of six African countries included in MOHProf, this work comprised a pilot study for this doctoral research. More information on this study is discussed later on in this chapter.

“Push” factors are those that drive outward migration from source countries to higher resourced destination countries. They include poor remuneration, poor working conditions, lack of job satisfaction, lack of medical infrastructure, poor safety and risk of disease, weak professional recognition, frustration with responses to health worker issues, lack of career development opportunities, poor housing and quality education for children, cost of living, taxation levels and lack of economic security (Arah, 2007; Arah, Ogbu, & Okeke, 2008; Awases, Gbary, Nyoni, & Chatora, 2004; EQUINET, 2007; Kline, 2003; R. N. Labonte et al., 2006; R. Labonte, Packer, & Klassen, 2006; McIntosh, Torgerson, & Klassen, 2007; Pendleton & Crush, 2008). The “pull” factors are those that draw inward migration higher income destination countries and include better pay, improved working conditions, job security, a clear career

² EQUINET is a network of professionals, civil society members, policy makers, state officials and others within the region who have come together as an equity catalyst, to promote and realize shared values of equity and social justice in health. Available: <http://www.equinet africa.org/>

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path and reduced occupational risks and inadequate trained health personnel in high income countries (Connell, 2008; EQUINET, 2007; Pendleton & Crush, 2008).

“Stick” factors increase health worker retention at the source country level, and include high morale and recognition of health workers, fringe benefits and incentives, support for career paths, fear of the unknown, family kinship, and social, cultural or patriotic ties (EQUINET, 2007; Tjadens et al., 2012).

“Stay” factors are those that discourage return migration once health workers are in a destination country post-migration, and include risk of disruption to children’s education, reluctance to disrupt new lifestyle patterns, promising career paths and lack of return incentives or knowledge of job opportunities in the source country (EQUINET, 2007; Tjadens et al., 2012).

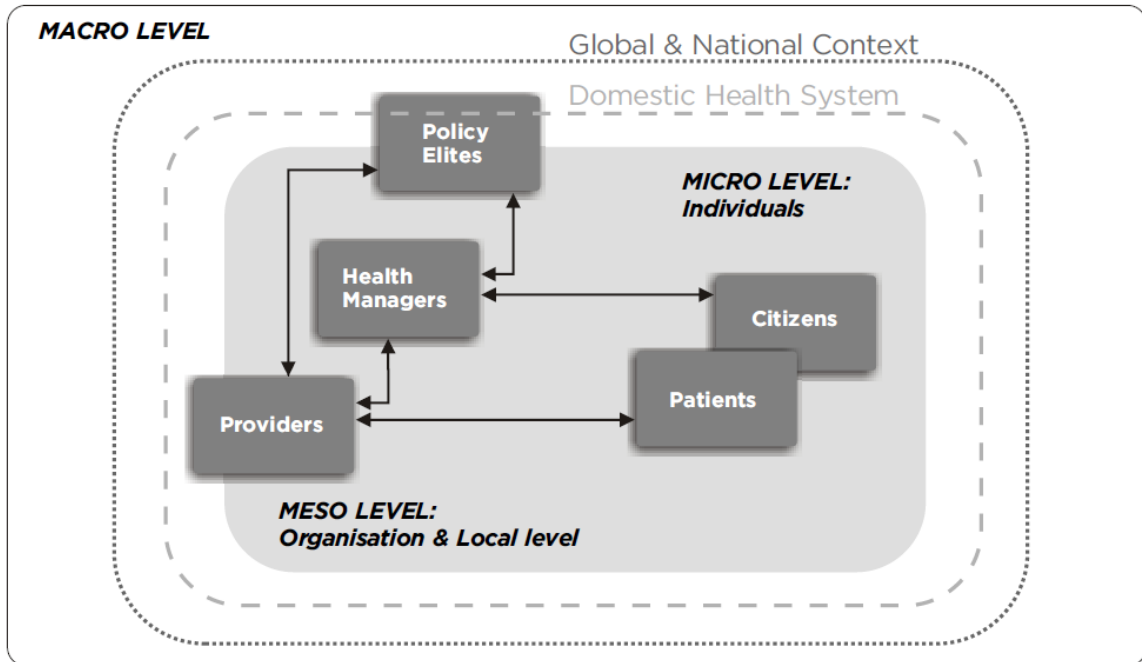
Adding the “stick” and the “stay” factors to the analysis provides a much richer context to the factors influencing the migration choices of health professionals. While my doctoral research does not extensively explore the “stay” factors in destination countries, it lays a solid foundation on the factors at the source country level. Indeed, present knowledge gaps are those on the factors in source countries that influence both migration and retention of health professionals.

Macro, meso and micro levels of analysis

A characteristic of the population health approach is the examination of the various levels that influence the context of a given issue, whether it be at an individual, community, organizational or government/policy level (Etches, Frank, Di Ruggiero, & Manuel, 2006). Widely used population health models emphasize the various actors as well as levels of influence, and require action not just at an individual level but also at a more upstream or government/policy level (Etches et al., 2006; Hamilton & Bhatti, 1996). In the field of health services and policy research, Gilson (2012) recommends a similar approach to addressing challenges in the health system. She identifies the macro level as incorporating the global and national context as well as the domestic health system; the meso level encompasses the

organizational and local level and the micro level includes individuals such as health managers, patients and service providers (Gilson, 2012). Figure 1.2 summarizes the different levels and actors.

Figure 1.2: Health Policy and Systems Research a methodology reader – Lucy Gilson Editor pg. 24



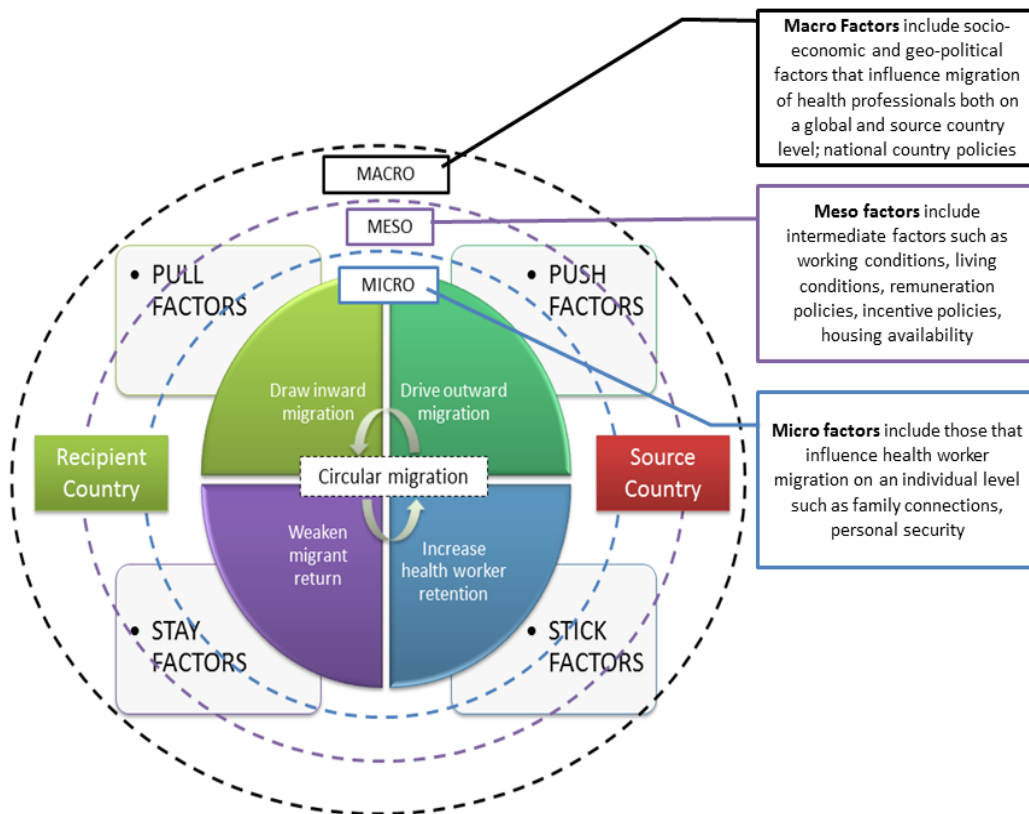
Conceptual framework on Push, Pull, Stick and Stay Factors

Building upon Pillay’s model and EQUINET’s synthesis of the factors, the new conceptual framework was developed to analyze HRH particularly with regards to migration both internally and internationally. In order to enrich the analysis of the “push”, “pull”, “stick” and “stay” factors, Brenda Dogbey merged the two approaches, introducing the analysis at a macro, meso and micro level in order to draw out the factors at each level and their interconnectedness (Figure 1.3). Circular migration was also added to the framework, which encompasses more recent attention given to return migration. In the framework, the “macro” level includes but is not limited to the socio-economic and geopolitical factors that influence the labour market both at a global and a source country level. The “meso” factors represent

intermediate factors such as working and living conditions, remuneration policies, occupational health policies and incentives. The “micro” factors include those factors that tend to affect health worker decisions on an individual level such as job security, family, personal security and decision-making that is often influenced by the other levels but that is ultimately undertaken by health professionals personally.

These levels although referenced implicitly were not previously included explicitly in the push, pull, stick and stay conceptual analysis. Adding these levels of analysis allows better understanding of the factors that influence health professional decisions to migrate either to urban or international destinations and presents opportunities for intervening that the appropriate level and/or multiple levels.

Figure 1.3: Conceptual framework on migration factors



Summary

The systems thinking approach was chosen as it allows for an integrated analysis of the various contextual layers of HRH migration. It also places a high emphasis on the interconnectedness of the various aspects of the health system. Migration of health professionals has often been construed as individual health professional decisions influenced by larger “pull” forces from destination countries. The conceptual framework developed from this thesis allows for a deeper understanding of the factors at both the source and the destination countries and at multiple levels, allowing for development of promising solutions that target the appropriate level of intervention.

GLOBAL LITERATURE REVIEW

Global overview of migration of HRH

Health worker migration has gained increasing prominence due to the global shortage of over seven million health workers (WHO/GHWA, 2013). There have been key milestones towards addressing the HRH global shortage over the past decade discussed in detail in Chapter 3. . Two of these milestones include the release of the WHO World Health Report in 2006 focused on Human Resources for Health as well as the creation of the Global Health Workforce Alliance (GHWA) bringing the plight of health workers and their critical role in supporting health systems into the limelight.

The 2008 adoption of the Kampala Declaration and Agenda for Global Action and subsequently the WHO Global Code of Practice on the International Recruitment of Health Personnel for example, provide concrete ways for policy and decision makers to manage migration and HRH both at source and destination country level (WHO, 2008a; WHO, 2010b). In this section I discuss key migration flows, and the push, pull, stick and stay factors in the context of sub-Saharan Africa; and review the already known impacts of migration and selected policy responses.

Migration flows

Migration is not a new phenomenon and has been occurring for decades; what is increasingly alarming is the magnitude of the flows in the context of the current health worker shortages (Connell, 2008; Connell et al., 2007). According to Clemens and Patterson (2008), approximately 65,000 African-born physicians and 70,000 African professional nurses were working overseas in developed countries in 2000, representing about one fifth of African-born physicians in the world and about one tenth of African-born professional nurses. Migration is shaped by both market forces and cultural ties due to uneven global development (Connell, 2007). A review of literature on migration of health workers from Africa found that an estimated 23,407 South African doctors were in Australia, New Zealand, Canada, United Kingdom, and the United States (8,999 in the United Kingdom alone) as of 2009. There were also over 10,000 South African nurses in the United Kingdom, with similarly large numbers in New Zealand, Australia, Canada and United States (Naicker, Plange-Rhule, Tutt, & Eastwood, 2009).

Migration has become increasingly complex, involving almost all sub-Saharan countries, including intra-regional and stepwise movement, for example, from the Democratic Republic of Congo to Kenya, and from Kenya to South Africa, Namibia and Botswana (EQUINET, 2007) (). In the context of intraregional migration in Africa, countries like South Africa or Botswana are more attractive than countries like Madagascar or Guinea, mostly for economic reasons (EQUINET, 2007). South Africa and Nigeria have remained the main African sending countries, but the number of doctors qualifying to practice in the UK from Zimbabwe, Ghana and Zambia has significantly increased and the same has been noted with regards to nurses (EQUINET, 2007) . The UK was the leading destination for health professionals from Zimbabwe and from a mere 76 health professionals in 1995, the number increased to 2,825 in 2003; moreover, 83% of the work permits obtained in 2003 (of the 2,825) went to nurses (Chikanda, 2010).

In 2008, over a tenth of the doctors working in the UK were from Africa and an estimated 13,727 physicians trained in SSA were practicing in Canada, UK, US and Australia, while about a third of medical

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graduates from Nigerian medical schools migrate within 10 years of graduation to Canada, the US and UK (Mills et al., 2008). Health professionals are therefore on the move both within and outside of sub-Saharan Africa with the key destination countries being the UK, USA, Canada and Australia.

In the literature, a distinction is made between temporary and permanent migration. In many instances, health personnel migrate for a short period of time and return to their country or place of origin. It has been suggested that temporary migration can be beneficial to source countries as healthcare professionals return with more experience, skills and personal resources than when they left (Connell, 2008; Connell et al., 2007). Circular and return migration have recently been identified in the literature in the context of promising practices with the goal of encouraging return so as to support the source country health systems (Barnighausen & Bloom, 2009; Hagopian et al., 2005)).

International Literature on Push, Pull, Stick and Stay Factors

To explore the factors that influence migration of health professionals, I analyze the push, pull stick and stay factors at a macro, meso and micro level. The macro level represents the overall socio-economic context as well as the geopolitical context; the meso level represents the organizational level and describes working conditions; the micro level represents the factors that influence individual decisions of health professionals at a more proximal level. The push factors within source countries are those that drive outward migration; pull factors are those that draw inward migration to higher income destination countries; stick factors are those that encourage people to remain in source countries or discourage migration; Stay factors are those that weaken migrant return from destination countries (EQUINET, 2007; Tjadens et al., 2012). Migration decisions are complex and involve various factors including the desire for improved working conditions and better living conditions for family, juxtaposed with fear both of the unknown destination country and for personal safety in the source country (Blacklock, C., Ward, A.M., Heneghan, C., & Thompson, M., 2014). Literature on push, pull, stick and stay

factors is discussed in detail in chapter 3 of the thesis. Table 1.1 summarises the key push, pull, stick and stay factors from the literature.

Table 1.1: Summary of Push, pull, stick and stay factors at a macro, meso and micro level

DESTINATION COUNTRY		SOURCE COUNTRY	
PULL FACTORS		PUSH FACTORS	
Macro	<ul style="list-style-type: none"> ▪ Stronger and more stable economies ▪ Lower levels of poverty ▪ Overall health system shortages 	<ul style="list-style-type: none"> ▪ Weak health systems ▪ Volatile and unstable political conditions ▪ Lack of political accountability of unsafety ▪ Economic instability and high taxation levels 	
Meso	<ul style="list-style-type: none"> ▪ Better working conditions ▪ Unmet need for health professionals in local health organizations ▪ Aggressive recruitment of health professionals ▪ Housing and better living conditions 	<ul style="list-style-type: none"> ▪ Poor working conditions ▪ Lack of medical infrastructure ▪ Poor response to health professional concerns ▪ High workload and burn out due to HRH shortages 	
Micro	<ul style="list-style-type: none"> ▪ Better salary/remuneration ▪ Possibility of sending remittances ▪ Personal safety in destination countries ▪ Career development opportunities 	<ul style="list-style-type: none"> ▪ Poor remuneration ▪ High cost of living and inability to meet personal needs ▪ Lack of educational opportunities for children especially in rural areas 	
STAY FACTORS		STICK FACTORS	
Macro	<ul style="list-style-type: none"> ▪ Political stability ▪ Economic stability 	<ul style="list-style-type: none"> ▪ Political changes such as political stability ▪ Health policy developments 	
Meso	<ul style="list-style-type: none"> ▪ Better working conditions in destination ▪ Better salary/remuneration 	<ul style="list-style-type: none"> ▪ Retention schemes and incentives for health professionals 	
Micro	<ul style="list-style-type: none"> ▪ Educational opportunities ▪ Fear of disrupting children’s’ education ▪ Friendships and networks in destination ▪ Lack of opportunities upon return 	<ul style="list-style-type: none"> ▪ Family, kinship and cultural ties ▪ Patriotism to one’s country ▪ High quality of life in urban areas ▪ Fear of the unknown in destination countries ▪ Complicated licensing processes in destination ▪ Unwillingness to learn a new language/culture 	

Impacts of migration

The most serious impacts of shortages have been at the rural and remote level. One of the largest impacts of shortages of HRH has been in service delivery (Anderson & Isaacs, 2007; Gross et al., 2011; North, 2007; Roberts, 2008). Roughly seventy percent of Tanzania’s population, for example, lives in a rural area, but most health workers are heavily concentrated in urban areas particularly high skilled workers (Bryan et al., 2006), a maldistribution of HRH common across SSA. One of the major reasons for maternal deaths and long-term morbidity is the lack of any medical or nursing supervision during

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pregnancy and childbirth (Steinbrook, 2007; WHO, 2014b). The emigration of doctors and nurses reduces the capacity of staff to deliver services to patients often leading to frustrating working conditions which further drives migration (Bidwell et al., 2014; Mwaniki & Dulo, 2008). Patient care is often compromised: in Zimbabwe, for example, the loss of nurses has led to reduction in consultation time for patients, and as a result, diagnosis and prescription of treatment are carried out hurriedly (Chikanda, 2005). Migration of health professionals also presents a loss in investment into the training and education of health professionals; Mills and colleagues found that in nine source countries, the estimated government subsidised cost of a doctor's education ranged from USD \$21,000 in Uganda to \$58,700 in South Africa (Mills et al., 2011).

Remittance from citizens to source countries is considered a positive impact of migration of HRH (Humphries, Brugha, & McGee, 2009; Jones, Bifulco, & Gabe, 2009; Oucho, 2008; Record & Mohiddin, 2006; Schrecker & Labonte, 2004). In Ghana, remittance is not formalized; nevertheless, nationals living abroad were said to have contributed US \$ 400 million in 2000 alone, while Eritrea has a formalized system requiring external citizens to pay 2% income tax to their home government (Dovlo, 2003). The specific remittance attributable to migrated health workers is challenging to capture particularly given that most remittances are done informally; such information would contribute to understanding the direct and indirect contributions of health workers to the economy in the source country and the health system.

A further consequence of migration is that patients are travelling overseas for health care, a concept broadly known as medical tourism. Health care spending in foreign countries represents a loss of spending within the country, potentially weakening both private and public sector health care provision and exacerbating the 'push' factors for HRH migration.³

³ Medical tourism as a factor in HRH migration has only recently received some research attention. It is not a focus of the studies undertaken for this thesis.

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George (2010) notes that the impacts also vary for male and female health workers noting that women tend to not migrate and hence bear the brunt of the burden for caring for the population when others migrate. He further describes that migration can reconfigure gender relations for health workers and within the family (George, 2010). Nurses often report struggling with social isolation and abusive practices from recruitment agencies; on the other hand at the family level, a female immigrant nurse might have higher opportunity for employment than her husband in destination resulting in her being the key income earner (George, 2010). These are all gaps in knowledge that if filled would contribute positively to a better understanding of the impacts of migration.

Promising solutions and policy responses

There have been a number of policy responses as well as promising solutions to mitigate the impact of migration of health professionals both at the international level as well as the source and destination country level. These responses are presented chronologically although they represent both domestic and international responses.

NHS Code and the Commonwealth Code (1999, 2003)

The Commonwealth Code of Practice for the International Recruitment of Health Workers (Commonwealth Code) was developed in 2003 following a global outcry on the widespread recruitment of health professionals particularly from Commonwealth countries to the UK (Buchan, 2007; Buchan, McPake, Mensah, & Rae, 2009; Dogbey, Benedict, Samuilova, & Moellering, 2012; Martineau & Willetts, 2006; Pagett & Padarath, 2007). Prior to this, the National Health Service (NHS) developed a code of practice on recruitment in 1999 effectively banning recruitment from South Africa and the West Indies; the Commonwealth Code, voluntary in nature, discouraged recruitment of professionals with bonding obligations to their governments. Following its introduction, migration of health professionals to the UK has decreased (Buchan, McPake, Mensah, & Rae, 2009; Gross et al., 2011). That it is voluntary in nature

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is one of the main limitations to its efficacy (Buchan, 2010; Labonte, Packer, & Klassen, 2006; Martineau & Willetts, 2006).

Joint Learning Initiative (2004)

In 2002, the Joint Learning Initiative (JLI), a consortium of over 100 health leaders, academicians, practitioners, policy makers and implementers was supported by the Rockefeller Foundation, the Swedish International Development Agency and the Bill and Melinda Gates Foundation to landscape the global health workforce (Chen, 2004; Joint Learning Initiative, 2004). According to the JLI, a lack of HRH played a significant role in the poor progress with the MDGs, and they concluded that mobilization and strengthening of HRH was critical to combating health crises in the world's poorest countries and in building sustainable health systems (Joint Learning Initiative, 2004). Between 2002 and 2004, the consortium established working groups, recruited members, conducted literature reviews, research and consultations with partner organizations (Joint Learning Initiative, 2004). The JLI further contextualised the need for rethinking HRH given the extraordinarily challenging context in global health involving new threats of infectious diseases including HIV/AIDS, the influx of financial resources and the insufficient human capacity particularly in low-income countries to handle these changes (Joint Learning Initiative, 2004). One of the key areas identified is the need for building knowledge and establishing the evidence base for action on HRH (Joint Learning Initiative, 2004).

WHO Resolutions WHA57.19, WHA58.17 and WHA59.23

In 2004, 2005 and 2006, the WHO passed resolutions WHA57.19, WHA58.17 and WHA59.23, respectively, concerning managing of migration of HRH (World Health Assembly, 57th Session, 2004; World Health Assembly, 58th Session, 2005; World Health Assembly, 59th Session, 2006). Resolution WHA57.19 recognized the 'importance of human resources in strengthening health systems and in successful realization of the internationally agreed goals contained in the United Nations Millennium Declaration' and urged member states to develop strategies to mitigate the effects of the migration of

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health workers (World Health Assembly, 57th Session, 2004). It further requested the Director-General to make take specific steps to address the HRH crisis including the creation of code of practice on international recruitment of health personnel and set the stage for a number of initiatives that have since been followed through including the 2006 World Health Report dedicated to HRH (World Health Assembly, 57th Session, 2004). Resolution WHA58.19 reinforced the support for the goals stated in WHA57.19 by requesting the Director General to further strengthen WHO's program on HRH by 'allocating...adequate resources, in particular financial and human resources' and requested a report of the outcomes the next year (World Health Assembly, 58th Session, 2005). Finally Resolution WHA59.23 was focused on support to health training institutions to scale-up production of health workers (World Health Assembly, 59th Session, 2006).

World Health Report on HRH (2006) and GHWA

In 2006, the WHO released the World Health Report themed "Working Together for Health", entirely dedicated to highlighting the global shortage of HRH and the requirements for action (WHO, 2006). The member states of the WHO agreed to prioritize HRH globally and identified the countries facing critical shortages, including Kenya. The report highlighted key areas for action such as the need for a global code for ethical recruitment. The report also quantified the shortages in various countries within the context of the recommended numbers from the WHO. Following the report, the WHO has mobilized global support for HRH and within this, activities that mitigate the effects of mass migration of health professionals. In this report, Kenya was identified as one of 57 countries facing a critical shortage of health professionals. This report also launched the decade of HRH and the establishment of the Global Health Workforce Alliance (GHWA). The mandate of GHWA was to bring together various stakeholders including WHO member states, academics, health professionals and other key health system stakeholders to address the crisis of the global HRH shortage.

Kampala Declaration and Agenda for Global Action (2008)

The first Global Forum on Human Resources for Health was held in 2008 in Kampala Uganda at which the Kampala Declaration and Agenda for Global Action were signed off on by WHO member states (WHO, 2008). The Kampala Declaration themed “Health Workers for All, All for Health Workers” was a next step after the release of the 2006 World Health Report, and noted that progress in health and the health related MDGs would not be possible without health workers (WHO, 2008). The Declaration called upon governments to provide the necessary momentum around action on the HRH challenges, to develop the appropriate health workforce skill-mix and for richer countries to meet their own training needs so as to reduce international migration (WHO, 2008). The agenda for global action, passed at the same meeting provides six strategic pillars for action on the declaration including the development of the WHO Code on international recruitment of health professionals.

WHO Global Code of Practice on International Recruitment of Health Personnel (2010)

In 2010, the WHO World Health Assembly passed the WHO Global Code of Practice on the International Recruitment of Health Personnel (the Code) setting up guidelines for recruitment of health professionals internationally (WHO, 2010b). One of the goals of the Code is to promote ethical recruitment principles and practices particularly between high income destination countries and lower income source countries. The code is a voluntary in nature and does not provide boundaries for action by source countries neither does it commit destination countries to action. The table below summarizes key principles outlined in the Code.

Table 1.2: Key principles outlined in the WHO Code

Principle	Action
▪ Ethical recruitment	Discourages active recruitment from source countries
▪ Health workforce development and health systems sustainability	Source countries should develop health workforce planning, education, training and retention
▪ Fair treatment of migrant health personnel	Equal treatment for migrant health personnel
▪ International cooperation	Collaboration between source and destination countries for mutual benefit in the case of migration
▪ Support to developing countries	Technical and financial assistance should be provided by destination countries to source countries experiencing critical shortages
▪ Data gathering	Establish and maintain health information systems
▪ Information exchange	Periodic collection of data on health workforce, migration, health information systems and share with WHO

Source: Adapted from the WHO Code of Practice on the International Recruitment of Health Personnel (2010)

The Code represents a big first step towards managing the ethical recruitment of health professionals. It was passed in 2010 and the data collection for this research was conducted between August 2012 and February 2013 and so it might have been too early to assess its impact in the Kenyan context.

Second and Third Global Forums on HRH (2011, 2013)

The second Global Forum on Human Resources for Health was held in 2011 in Thailand and the third forum in Brazil in 2013. The third Forum discussed universal coverage with multiple global stakeholders and the key role that HRH play in achieving this goal. The Government of Kenya made specific commitments with regards to HRH at this Forum, including the recruitment of at least 12,000 health workers per year by 2017 comprising at least nurses, clinical officers, doctors and other cadres to support facility level health services (MOH Kenya, 2015).

Other responses

There have been an increasing number of responses to address the impacts of the shortages of HRH particularly over the past five years (Dal Poz et al., 2009). The World Health Organization (2006) defines incentives as all rewards and punishments that providers face as a consequence of the

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organizations in which they work, the institution under which they operate, and the specific interventions they provide. Financial incentives tend to have dramatic and immediate results, either slowing the exit of workers from the health sector or attracting them to the system. In Malawi, a 52% pay raise reduced worker attrition from the public sector in a few months (Palmer, 2006). GHWA together with the WHO and other global partners held the first global forum on HRH in Kampala, Uganda, and passed the Kampala Declaration and Agenda for Global Action (WHO, 2008a). Some of the priorities outlined in the Kampala Declaration include commitment both from governments and from non-governmental organizations to prioritize action on HRH. The agenda for global action outlines the steps to be taken to achieve these goals including six pillar areas. Migration of health workers was one of the priority areas identified. The development of long-term HRH strategies has been a response where short-term HRH strategies have not worked and where chronic disease management such as HIV/AIDS has exposed the need for human resources for health both in the short and long term (Caihol, J et al., 2013).

Knowledge gaps

Although the push and pull factors for international migration from developing countries are known both anecdotally and empirically, there has been a dearth of analysis of these factors in country specific contexts. The internal push, pull, stick and stay factors are often a precursor to international migration. In a country like Kenya where maldistribution continues to pose a challenge, there is a need for the context specific analysis that involves the interrogation of the factors influencing health worker decisions and policy influencers in order to manage both internal and international migration.

Information is required on the distribution of health workers from rural to urban, public to private and between countries so as to capture the extent of international migration of health workers. Much more analysis is required to improve on the understanding around the linkages in migration of health workers.

CONTEXT OF HRH RESEARCH IN KENYA

Kenya was chosen as a country of focus for the doctoral research following the opportunity to conduct the pilot phase of research described more fully below. Kenya presents an interesting case-study for HRH and migration for a number of reasons. Prior to 2000, Kenya had a weak health system and high rates of out migration (Gross et al., 2011). Changes in Kenya's political climate have had an impact on its overall socio-economic growth with annual GDP growth rates of as high as 7% in the mid-2000s. Some of these changes have been translated into increased funding into the health system and a jump-start into hiring in the public sector. Kenya was one of six African countries chosen for the Mobility of Health Professionals project (MOHProf) (Dogbey, Benedict, Samuilova, & Moellering, 2012; Tjadens et al., 2012). Having conducted the field research for the MOHProf project, I chose to build upon the findings by delving deeper into the issues relating to both internal and international migration of Kenyan health professionals. Findings from this research are relevant to similar contexts to Kenya in sub-Saharan Africa and have the potential to influence policy and decision makers with regards to managing migration particularly at an internal level. I discuss some of the literature that provides a context to the migration of health professionals from Kenya.

Kenya's health policy context – 1980s and 1990s

The 1980s and 1990s represented a challenging time in Kenya's health system due to the policy context as well as the poor socio-economic and geopolitical context. One of the key factors affecting Kenya's policy context were Structural Adjustment Programmes (SAPs), a set of economic policies that were promoted by the World Bank and the International Monetary Fund (IMF) during these two decades, mostly to developing countries that were facing international debt re-payment crises and poor economic growth (WHO, 2013). SAPs prioritized economic growth in poor countries by restructuring the economy and reducing government intervention in most sectors (WHO, 2013). In Kenya, as in most sub-Saharan African countries where SAPs were implemented, the impact of the policies was a decline in fiscal

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spending on education and health (Dogbey et al., 2012; Rono, 2002). Wage ceilings were introduced resulting in hiring freezes in the public sector, particularly in health and education (Adano, 2008; Rono, 2002). While a direct causation cannot be assumed, the challenging socio-economic working context impacted not only on service delivery but also on migration of health professionals who were unable to find positions within the public system. SAP policies also increased the growth of the private health sector and most likely impacted internal migration to urban centres where most of the private facilities for fee-paying patients are located. In the absence of strong government presence in the rural areas, faith-based organizations filled the gap in service delivery (Mwaniki & Dulo, 2008). SAPs have been criticized for their negative impact on the social sector, particularly the health sector, and have been particularly criticized for affecting the supply of health services due to cuts in health care spending and reductions in the demand for private or user-fee public health services due to declining household income (WHO, 2013). More recently, Kenya has made significant progress in the area of HRH policy discussed in more detail in chapter 2 (MOH Kenya, 2014; MOH Kenya, 2015; MOMS Kenya, 2008; MOMS Kenya, 2009; MOMS Kenya, 2010) that is reversing some of these SAP-related impacts; but as this study argues, there remain areas for further improvement.

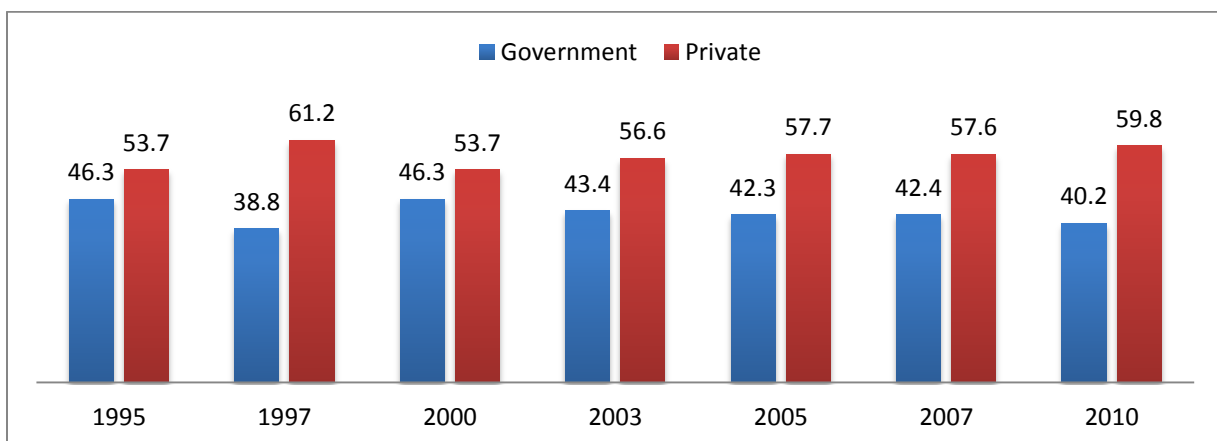
Organization and financing of the health system

The Kenyan health system is organized into three tiers, primary, secondary and tertiary and comprises public sector facilities, private facilities, and faith-based organizations (FBOs) (Dogbey, Samuilova, & Moellering, 2012). These form the levels of care in the Kenya Essential Package of Health Care (KEPH) (MOMS Kenya, 2008). The total government expenditure on health as a percentage of Gross Domestic Product (GDP) was 4.5% in 2013, and has remained fairly consistent for the preceding decade (WHO, 2014a). In the same year, the government spent 5.9% of its total expenditure on health. A larger proportion of the health expenditure is from the private sector (58.3%) compared to the

government expenditure (41.7%) (WHO, 2014a). Figure 1.4 shows the trend in expenditure on health between the government and private sector.

An assessment of the private health sector conducted by the World Bank found that it includes both for-profit and not-for-profit Faith Based Organizations (FBOs) and non-governmental organizations (NGOs); overall private sector is the largest employer of health professionals in Kenya as of 2006 (Barnes, J. et al., 2010). Private for-profit hospitals constitute 47% of the total health expenditure in the Kenyan private sector while not-for-profit hospitals represented 18% of the same (Barnes, J. et al. 2010). Most of the private sector facilities are nursing homes and clinics while public sector facilities are mostly hospitals and dispensaries – 53% of hospitals are public while 24% are not-for-profit and 23% are for-profit. Finally a small number of large-scale providers dominate the private sector, providing service through hospitals in Nairobi (capital), Mombasa (second largest city) and Kisumu (third largest city); there is also a large number of small-scale providers throughout the country struggling to maintain their services and business (Barnes, J. et al. 2010). In the health policy document, the government acknowledges the constraints produced from under-financing in health and the need for increased funding to the health system (MOMS Kenya. & MPHS Kenya., 2012).

Figure 1.4: Government and private expenditure on health as a percentage of total health expenditure



Source: WHO Global Health Observatory – Kenya data (2014)

Migration Flows

Migration flows follow the general pattern of rural to urban, public to private both concurrently and subsequently, and then internationally (Mwaniki & Dulo, 2008). As of 2008, Kenya was second only to South Africa in the number of its physicians working abroad (Mwaniki and Dulo, 2008). A study on out-migration of nurses from Kenya between 1997 and 2007 found that six percent of Kenya's approximately 40,000 nurses applied to migrate; 81% of the applicants had graduated from the Bachelor of Science in Nursing program and 49% applied to migrate within 10 years of registering as a nurse in Kenya (Gross *et al.*, 2011). The same study found that the top migration destinations identified in this study was the USA and the UK (2011). A more recent study on out-migration of Kenyan nurses found that the intent to migrate also peaked (Gross *et al.*, 2011). It also found that Kenya's inability to absorb younger nurses contributed to their out-migration and resulted in economic loss to the country. Finally, the extent of circular migration and return migration has been little studied in the Kenyan context and is an area for further research. Anecdotally, there is an increasing trend towards return migration of younger health professionals particularly in the context of increasing economic hardship in the destination countries.

Impacts of Migration

Kirigia and colleagues conducted a study on the cost estimate of health professionals' brain drain in Kenya and found that the average cost for a 5 year training program per nursing student was approximately US\$ 16,901 and increased to US\$25,352 when living expenses and accommodation were factored in (Kirigia, Gbary, Muthuri, Nyoni, & Seddoh, 2006). The cost estimates for doctors was US\$43,180 and US\$65,997 respectively. There are limitations to their methodology, for example, their inclusion of primary education in their costing; their study nonetheless points to the economic losses met by a country like Kenya when health workers migrate internationally. Other impacts on health service delivery include maldistribution skewed to urban areas, reliance on non-physician and non-clinician health

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workers and migration to non-health sectors (Kirigia et al., 2006; Mwaniki & Dulo, 2008; National Health Workforce Observatory Secretariat Kenya, 2010; Ndetei et al., 2008; Stilwell & Campbell, 2008).

A study by Ndetei and colleagues (2008) identified the financial and non-financial incentives for health workers in Kenya. Incentives were not uniformly applied and mostly targeted doctors and nurses. Junior cadres with basic qualifications were often posted to work in public facilities and district hospitals, their salaries were low, they did not qualify for most of the allowances including travel allowances, and they were not offered the incentives packages found at better-financed, central services. This was especially so for health workers in more remote areas unless specific, additional provisions were offered to those working in these peripheral service (Ndetei et al., 2008).

Policy Responses

There have been a number of policy responses in order to address the current HRH crisis and mobility of health professionals within Kenya.

Macro policy responses

At a macro level some of the responses include the Commonwealth Code of Practice and the Global Code of Practice on The International Recruitment of Health Personnel, both of which have already been discussed. As earlier noted, Codes have been criticized for their limited ability to reduce recruitment particularly because they are voluntary and non-binding (Buchan, 2010; Martineau & Willetts, 2006). Also at the macro level are bilateral (two-country) agreements. One such agreement was between Kenya and Namibia through a Memorandum of Understanding allowing for temporary movement of health workers from Kenya to Namibia upon request from Namibia (Pagett & Padarath, 2007). The agreement was put in place due to Kenya's inability to absorb all of its health workers into the public system after wage restrictions were put in place to comply with the IMF loan conditionalities (Pagett & Padarath, 2007). The restrictions have since been lifted although the impact of not employing health professionals and the consequences including migration are still being experienced.

Meso policy responses

At the meso level, the Kenyan government has developed a number of responses including an emergency hiring program in 2007 (Adano, 2008). The program was set in place by USAID's Capacity project in consultation with the then Ministry of Health with the goal of hiring approximately 5,000 nurses, 1,000 clinical officers and 1,200 laboratory staff who were unemployed and potentially available for hire⁴ (Adano, 2008). As of 2008, 830 staff had been hired through the program (Adano, 2008). More recently, Kenya has carried out a similar emergency plan through the economic stimulus package to hire 4,200 nurses, 20 for each of the 210 constituencies with the support of the Danish International Development Agency (DANIDA) (Dogbey, Samuilova, & Moellering, 2012). The challenge with emergency hiring plans is that they are temporary, and do not address the longer term shortages particularly if the health worker salaries do not become a part of the overall health budget.

The most recent domestic response to the current HRH crisis has been the development of a National HRH strategic plan in 2009 (MOMS, 2009) and an updated plan in 2014 (MOH Kenya, 2014). HRH is also a priority within the Ministry of Medical Services Strategic Plan (2008-2012) and the Ministry of Public Health and Sanitation Strategic Plan (2008-2012) (MOMS, 2008; MOPHS, 2008). This has provided the government with a strategic plan of action in managing HRH and is a direct follow up from the recommendations in the Agenda for Global Action (WHO, 2008a).

Micro policy responses

At the micro level, direct salary increments and direct incentives are some of the promising practices for health workers. In 2002, the Government of Kenya introduced payment of non-practice, risk and extraneous allowances to doctors in the civil service (Joint Learning Initiative, 2004). Limited

⁴ The Emergency Hiring Plan (EHP) was implemented as a short-term solution to address the shortages of health professionals; the goal was to ensure that public sector workers were not drawn from the system and instead aimed to attract those not in the system or those working in the private sector. New hires were given 3 year contracts with the end-goal of becoming permanent government employees. The plan was developed with support from the USAID Capacity project and monitored using a business model. (Adano, 2008)

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practicum sites and lack of pay during internships was a previous impediment to retaining nurses. In 2008, a decision to pay the previously unpaid nurse interns studying in a graduate program, who have to undertake practical work in order to qualify, is a positive response that will likely add to the attraction of nursing as a profession and may increase intake (Stilwell & Campbell, 2008).

Table 1.3: Summary of what we know and the knowledge gaps that persist regarding HRH migration in Kenya

What we know	Knowledge Gaps
<ul style="list-style-type: none">▪ Push and pull factors at the micro- and to lesser extent, meso- and macro- levels▪ The plight of health workers once they have left source countries and the need for their better integration into destination country systems.	<ul style="list-style-type: none">▪ The scope of migration; resource flows need to be calibrated and tracked with better quality data collected with more regularity▪ The experiences of workers who remain or return to source countries
<ul style="list-style-type: none">▪ Active and passive recruitment are currently being practiced by destination countries	<ul style="list-style-type: none">▪ The impact of the Code of conduct on policies that implement the changes at a source country level
<ul style="list-style-type: none">▪ General global trends in migration and the key destination countries	<ul style="list-style-type: none">▪ Regional trends in migration e.g. within sub-Saharan Africa, and context specific trends in migration in source countries
<ul style="list-style-type: none">▪ Small scale policy interventions are working▪ Bilateral interventions have been effective in identifying problems & outlining potential solutions	<ul style="list-style-type: none">▪ Scale up of policy recommendations and policy interventions – there’s a gap on how interventions function in a macro, meso and micro scale
<ul style="list-style-type: none">▪ Managing migration of health workers requires system-wide approaches particularly in improving the health system in source countries	<ul style="list-style-type: none">▪ Policy debates are constrained by insufficient data making it difficult to do evidence-based policy making▪ Magnitude and specificity of impact of migration of health workers on health systems and the health of the population

PARALLEL AND PILOT RESEARCH PROJECTS AND RESEARCH OBJECTIVES

This doctoral research was conducted in context of two other studies. First, this research is closely related to the research project “Source Country Perspectives on the Migration of Highly Skilled Health Professionals: Causes, Consequences and Responses” (SCoP), a study led by Prof. Ivy Lynn Bourgeault and Prof. Ronald Labonté at the University of Ottawa, with Prof. Gail Tomblyn-Murphy at Dalhousie University. The SCoP study was funded by the Canadian Institutes for Health Research (CIHR) between 2010 and 2014 – grant number 106493. The SCoP study focuses specifically on the migration of highly skilled health professionals from the Philippines, India, South Africa and Jamaica. I was a part of

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the development of the survey instruments and key informant interview guides for the SCoP study and adapted them for the Kenya study.

Second, as noted above, this research also built upon the findings from the Mobility of Health Professionals Study (MOHProf), which was funded by the European Union (EU) through the International Organization for Migration, Brussels office. MoHProf was a multi-country study researching current mobility trends of health professionals from and within the EU. I was involved as a national consultant in the second phase of the Kenya study for MoHProf which was conducted in two stages: a macro and micro stage. I revised the draft macro report, conducted additional data collection between January and June 2011 and analysed both qualitative and descriptive quantitative data. In-depth interviews were conducted with key informants (n=9) from government, development partners and non-governmental organizations; semi-structured interviews (n=11) with doctors and nurses; quantitative secondary data collection from the key organizations including government and development partners. I developed the Kenya country profile and the final Kenya report for the MOHProf project (Dogbey et al., 2012; Dogbey et al., 2012). I also contributed towards the overall project report (Tjadens et al., 2012). The data collected in the MOHProf project formed a pilot phase of my doctoral research.

An emerging theme from the key informant interviews in the MOHProf study was that international migration was no longer seen to be a priority for policy makers or decision makers, possibly due to lack of reliable data on trends in migration of perspectives of health professionals on international migration. The main push factors identified include remuneration which was the key motivating factor for migration followed by poor working conditions and lack of infrastructure at work. The key pull factors that emerged were better pay, education opportunities, better professional recognition and perceived friendliness of the destination country. At the stick level, issues raised included a preference to work for the government despite lower pay than the private sector, the fear of

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not being able to get a job, fear of racism, personal security, fear of not getting a visa, failure to raise the required funding to leave Kenya. Stay factors were not captured in the interviews. Clinical officers also emerged as a potential solution to address the shortages experienced but it was unclear as to how this could be operationalized as well as the barriers and facilitators of such an undertaking. The pilot phase shaped my doctoral research in that it led me to focus on building a broader and more coherent understanding of the context of HRH in Kenya through documentary analysis and key informant interviews.

Specific research objectives

Following the pilot phase, I developed the specific research objectives for the thesis. Given the knowledge gaps identified in the literature review, this doctoral research sought to address the gaps in key areas. The specific objectives of the research were to:

- 1) Conduct a contextual analysis of human resources for health in Kenya,
- 2) Understand the migration perspectives of doctors, nurses and clinical officers, and
- 3) Explore the role of the mid-level health worker cadre, specifically the cadre of clinical officers, as a promising HRH practice.

The three research objectives from the three phases of the research are described in detail in the methodology section.

OVERVIEW OF METHODOLOGY & DATA ANALYSIS

The research was conducted in three phases congruent with the 3 research objectives. Three manuscripts were prepared from the three phases of the research and are described in detail in chapters 2, 3 and 4 of the thesis. Below, I provide a summary of the methods and data analysis that were used in each of these research phases.

Phase 1: Contextual analysis of HRH in Kenya

The objective of this research phase was a contextual analysis of HRH in Kenya, examining the various key stakeholder perspectives. As previously noted, context is a key component of the systems thinking approach. Following the pilot phase of the research, it became apparent that an analysis of the overall health system organization, key developments in the health system and policy context as well as key informant perspectives would be critical in understanding the context of migration of health professionals from Kenya. A mixed-methods approach was used including a scoping review of literature, in-depth interviews with key informants who are key stakeholders in the Kenyan health system and secondary descriptive data analysis to complement the information collected.

The sub-objectives of this phase of the research were to answer the following research questions in the context of Kenya: 1) How have HRH concerns and HRH migration changed over time? 2) What are the broader HRH concerns within Kenya? 3) What role does HRH migration play in these concerns? Table 1.4 summarizes the key HRH stakeholders in the Kenyan health system.

Table 1.4 : Key Stakeholders in the Kenyan Health System

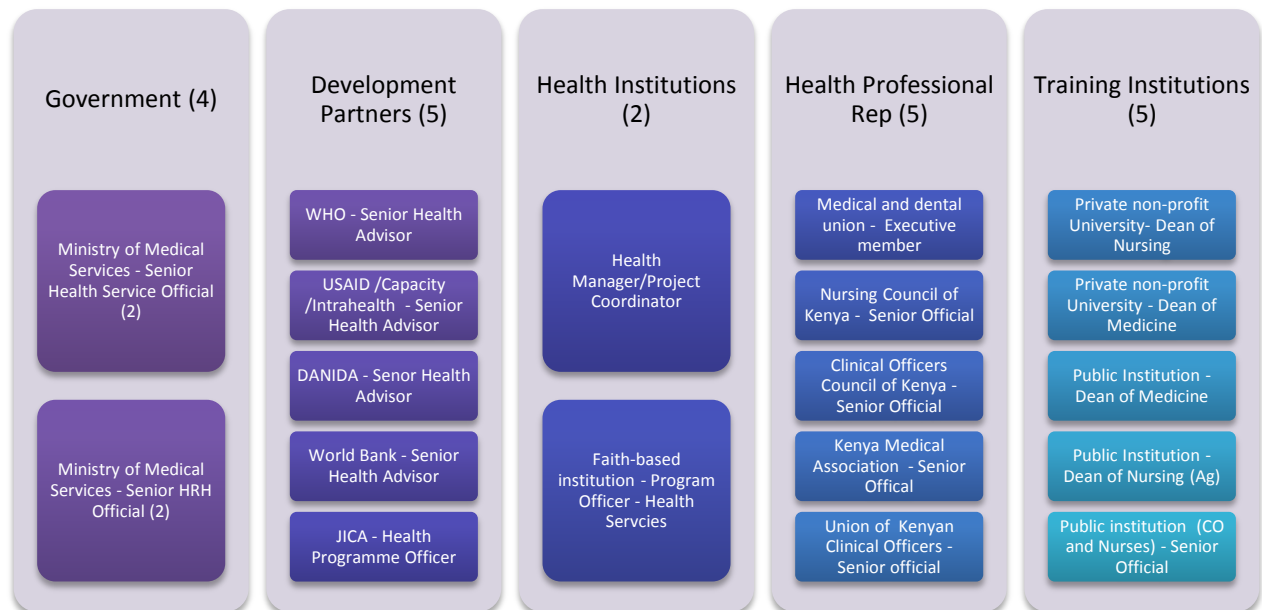
LEVEL	ACTORS	ROLE/CHARACTERISTICS
MACRO	<ul style="list-style-type: none"> ▪ National Ministries of Health ▪ Development Partners – Governments who influence National Policy – DANIDA, DfiD, Capacity Project/USAID ▪ World Health Organization ▪ Ministry of Finance ▪ International NGOs 	Developing National HRH strategies; ensuring that the strategies are implemented and put into place; funding of the health system
MESO	<ul style="list-style-type: none"> ▪ KMTTC and Universities e.g. Kenyatta University and Moi University; ▪ Regulatory bodies – KMPDB; Clinical Officers Body; Nursing Council of Kenya; ▪ KMPDU ▪ Health dispensary leaders ▪ Recruitment agencies ▪ Community ▪ Faith-Based Organizations and Non-governmental organizations 	Regulating health workers; Training of health workers; Representing health worker perceptions/rights; Community level
MICRO	<ul style="list-style-type: none"> ▪ Individual health workers ▪ International NGOs that hire health workers ▪ Students and practicing health workers ▪ Private Sectors 	The health workers themselves, where they work, their families their factors

LEVEL	ACTORS	ROLE/CHARACTERISTICS
	<ul style="list-style-type: none"> ▪ Public Sector Hospitals ▪ FBOs and NGOs 	

Methodological Approach

Descriptive secondary data from statistical abstracts, economic surveys and other government documents, development partners’ assessments of HRH in Kenya and other documents were collected and used to describe the current context of HRH in terms of numbers of health workers, supply of health workers and training of health professionals. I triangulated the methods by conducting semi-structured qualitative key-informant interviews (n=21) with key stakeholders who provided their perspectives of the trends and developments in managing HRH in Kenya. This number was chosen to ensure a mix of stakeholders including government, NGO, and development partner perspectives. A mix of secondary descriptive data and findings from qualitative interviews has been used effectively as part of a policy analysis in studies in Malawi and Zambia (Hanefeld & Musheke, 2009). Figure 1.5 provides a matrix of the interviews conducted with the key informants.

Figure 1.5: Matrix of interviews conducted with Key informants for Phase 1 of the research



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The interviews were manually coded and the findings analysed thematically at a macro, meso and micro level using the systems thinking approach. The data analysis and findings of this first phase are described in detail in chapter 2.

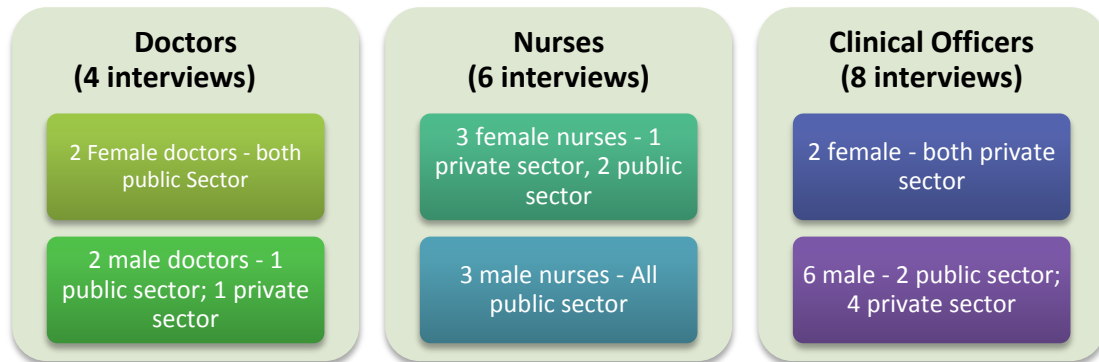
Phase 2: Migration perspectives of health professionals in Kenya - “push”, “pull”, “stick” and “stay” factors

The second phase of the research built upon both the pilot and the first phase of my doctoral study. From the literature review, doctors and nurses within the Kenyan context were seen as most likely to migrate internationally (Connell et al., 2007; Gross et al., 2011; Mwaniki & Dulo, 2008; Ndeti et al., 2008). The overall goal of this second research phase was to understand the perspectives of doctors, nurses and clinical officers (a previously under-studied HRH cadre) regarding living and working conditions, and internal and international migration. Specific sub-objectives of this phase of the research were to identify: 1. factors that motivate health professionals to join their profession; 2. health professionals' perspectives of living and working conditions in Kenya from a push, pull, stick and stay perspective; and 3) the migration perspective/intentions of doctors, nurses and clinical officers from Kenya.

Methodological Approach

A survey instrument was adapted from the SCoP study appended. An online version, of the survey was developed using Snap Survey hosted at the University of Ottawa. The survey covered the following areas: questions about training, current employment, living conditions, migration considerations, and demographic information. The online survey was used as it was both a time and cost efficient platform for obtaining responses from health professionals across Kenya. A mix of respondents (n=97) was obtained including those working in public, and private sector as well as faith-based non-governmental organizations. In-depth interviews (n=18) were then conducted with a selected number of respondents who expressed their availability. These were done both on phone and in person. Figure 1.6 summarizes the profile of health professionals who participated in the in-depth interviews

Figure 1.6: Matrix of in-depth interviews conducted with health professionals in Phase 2



The survey data was analysed using SPSS 20. The in-depth interview data were manually coded and analysed using the push, pull stick and stay matrix and complemented the survey data. Given the sampling choice and the small sample size, quantitative statements are not claimed to represent the entire health workforce in Kenya. The strength of this phase of the research lies in the qualitative interviews and the new themes arising from the perspectives of health professionals as well as the overall perspectives emerging from the survey. A similar study was conducted in Kenya and Benin where 37 and 62 semi-structured qualitative interviews were conducted respectively, with doctors and nurses in rural areas with specific attention to motivation (Mathauer & Imoff, 2006). The data analysis for this second phase is described in detail in chapter 3.

Phase 3: Promising solutions to HRH shortages and maldistribution in Kenya – scale-up of clinical officers

The third phase of the research entailed a case-study exploration of the potential for scaling up the use of mid-level health workers and specifically clinical officers to address current HRH shortages in Kenya. As noted from the literature review and the pilot phase of the research, clinical officers have been little explored in terms of their potential to reduce the impact of migration and maldistribution of HRH especially in the context of Kenya. A case-study approach was implemented which involved a scoping review and in-depth interviews (Yin, 2014). Specific sub-objectives of this phase were to answer the following questions: 1) What are the attitudes of key stakeholders and health professionals to the

Chapter 1: Introduction

utilization of clinical officers in the context of Kenya? 2) What are the barriers and facilitators in scaling-up the clinical officer role?

Methodological Approach

A scoping review of the literature on mid-level health professionals in sub-Saharan Africa was conducted using the methodology proposed by Arksey and O'Maley (2005). Key informant interviews were conducted with the major stakeholders in the Kenyan health system (n=21) as well as health professionals (n=18). Figures 5 and 6 above summarize the profiles of those interviewed for this phase of the research. The interview data were manually coded and analysed using a thematic analysis based on the findings from the scoping review. A SWOT analysis – strengths, weaknesses, opportunities and threats – was then conducted on the key informant interviews to explore the barriers and facilitators of scaling up the clinical officer cadre in the context of Kenya (Dyson, 2004; Helms & Nixon, 2010). The findings from this phase of the research are detailed in chapter 4 of the thesis.

Summary

In all three phases of the research systems thinking was incorporated as a theoretical approach and the conceptual framework developed shaped the analysis of each phase. Human resources fit within the broader context of the health system and are interconnected with the other players and components. An intervention at the level of HRH has an effect on the other levels of the system, and vice versa. By incorporating a systems thinking approach, I explored the linkages, relationships and interactions between the various actors and components related to the context of HRH in Kenya in the first phase of my research. I further examined the migration perspectives of doctors and nurses, relating the results back to the broader system. Finally, I examined the promising practice of scaling up clinical officers, all within the context of the broader health system.

ETHICAL CONSIDERATIONS

Ethical approval was obtained from the University of Ottawa research and ethics board and from the Great Lakes University of Kisumu in Kenya. Letters of approval for conducting interviews were also obtained from the Ministry of Medical Services and the University of Nairobi. Written consent was obtained from all participants who were interviewed in person. A “yes” response was required providing consent to participate in the online survey; participants who responded “no” were immediately directed to the end of the survey. Verbal consent was obtained from health professionals who participated in phone interviews as well as their permission to have the interview recorded after the information on the informed consent form was read to them. No identifying information was collected such as names and personal information of the survey respondents. Key informants were presented in the data analysis by their role and institution rather than their individual names. Letters of approval, ethics certificates, and the informed consent form are appended at the end of the thesis.

OVERVIEW OF THESIS CHAPTERS

Three manuscripts have been developed from each of the three phases of the research and are detailed in chapters 2, 3 and 4 of the thesis respectively. Chapter 2 represents the first manuscript from the research entitled “Context of migration of human resources for health in Kenya: shifting priorities and migration perspectives”. In it, I provide the broad context of HRH in Kenya from the key informants’ perspective and provide an overview of the key concerns in HRH at the macro, meso and micro level. Chapter 3 represents the second manuscript from the research and is entitled: “Migration perspectives of health professionals from Kenya: push, pull, stick and stay factors”. In this paper, I present the findings from the online survey as well as in-depth interviews with health professionals. It provides key insight into the push, pull, stick and stay factors and from Kenya particularly the stick factors which have previously been neglected in the literature. Chapter 4 presents the third and final manuscript from the research and is entitled “Promising solutions to the Human Resources for Health shortages and

Chapter 1: Introduction

maldistribution in Kenya: exploring the scale-up of clinical officers”. As the title suggests, I present the findings from in-depth interviews with key informants and health professionals regarding the barriers and facilitators of scaling up clinical officers, a mid-level cadre in the context of Kenya. In chapter 5, I provide an overall conclusion of the thesis, bridging the 3 manuscripts together and discuss the strengths, limitations and areas for future research. Finally chapter 6 outlines the dissemination efforts for the research findings.

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Chapter 2

Manuscript 1: Context of Migration of Human Resources for Health in Kenya: shifting priorities and migration perspectives

Brenda Dogbey, Ivy Bourgeault, Ronald Labonté

ABSTRACT

Context: This research explored the context of the migration of health professionals in Kenya both internally and internationally. A global shortage of 7.2 million health professionals threatens service delivery particularly in sub-Saharan Africa which experiences the greatest shortages compounded by the largest global diseases burden. In Kenya, the shortages are exacerbated by internal maldistribution of health professionals, international migration and other economic and policy factors. These negatively impact service delivery particularly to rural populations who constitute the majority of the population. The objectives of this paper were to answer the following questions:

1. How have HRH concerns and HRH migration changed over time?
2. What are the broader HRH concerns within Kenya?
3. What role does HRH migration play in these concerns?

Methods: A mixed-methods approach was used including a documentary analysis of descriptive secondary data and in-depth interviews (n=21) with key stakeholders in the health system. Data collection took place from August 2012 to February 2013. A systems thinking approach was used to frame the data collection and analysis at the macro, meso and micro level.

Findings: There have been a number of significant developments in the policy context of health professionals in Kenya including development of a new health policy, changes in governance due to a new constitution and short-term hiring initiatives all of which have influenced migration perspectives and migration as a whole. All stakeholders agreed that there are shortages in health professionals, due to maldistribution (doctors and nurses) and lack of absorption into the health system (mid-level cadres such as clinical officers). International migration was deemed to no longer be a policy priority by government and development partner stakeholders who asserted that migration has significantly decreased in recent years. Job satisfaction in the public sector has increased particularly among doctors. Health professional representatives in contrast asserted that health professionals continued to be disgruntled with the current situation and would not hesitate to migrate given the opportunity.

Conclusions: The changes in Kenya's health governance through development of strategic plans and policies have the potential to transform the context of HRH migration and service delivery. Dissatisfaction persists among health professionals; this should not be ignored as the paradox of an oversupply of health professionals who cannot be absorbed juxtaposed in a context of shortages may retrigger a wave of migration. Such conditions would create a perfect storm for out migration which could have dire effects and undo the gains in HRH management of the past few years.

INTRODUCTION

The international mobility of health professionals has been the subject of debate among policy makers, practitioners, and researchers over the past few decades. As of 2006, a shortage of 4 million health professionals was identified as a key limiting factor in health service delivery globally by the World Health Organization (WHO). By 2013, that number had nearly doubled to 7.2 million, and this figure is projected to increase to 12.9 million by 2035 (WHO/GHWA, 2013). Sub-Saharan Africa (SSA) was found to experience the greatest shortages, compounded by the largest global burden of disease arising mostly from communicable and increasingly non-communicable diseases (WHO, 2014b).

Within countries in SSA, these shortages are exacerbated by internal maldistribution of health professionals and by international migration, which negatively impacts service delivery particularly to rural populations who constitute the majority (WHO, 2014b). The WHO recommends a minimum skilled birth attendant density of 22.8 per 10,000; more than half of the countries with a lower skilled birth attendant density are in SSA and have a coverage of less than 80% impacting neo-natal, infant health and maternal health and ultimately influencing health outcomes over the life course (WHO, 2014b; WHO/GHWA, 2013). Furthermore, access to health service providers is a key determinant of health particularly for rural populations.

In Kenya, the focal country of this paper, 24% of the population is urban based while in many urban areas the concentration of health professionals, particularly doctors, is as high as 70% (KNBS, 2015). The implications of this gross maldistribution of health professionals on equity in access to health care are deep and far-reaching, particularly for rural-based vulnerable populations. Policy and non-policy efforts to mitigate the impacts of both internal maldistribution and international health worker migration to date have concentrated on doctors and nurses, neglecting other skilled health worker cadres (Kirigia et al., 2006; Mwaniki & Dulo, 2008). There is increasing interest across much of Africa in the role of mid- and lower-level cadres in health system strengthening, although there remain gaps in

understanding their potential impacts on access and health outcomes (Mbindyo P, Blaauw D, & English M, 2013; Wilson et al., 2011).

This paper reports on research undertaken to examine skilled health worker mobility in Kenya, both internally and internationally, as part of a broader study examining the perspectives of health professionals on the potential role of mid-level cadres in health system strengthening, following various national health system reforms. The objective of this phase of the research, the first of three phases, was to conduct a contextual analysis of Human Resources for Health (HRH) in Kenya, examining the various key stake-holder perspectives. The research sought to answer the following questions:

1. How have HRH concerns and HRH migration changed over time?
2. What are the broader HRH concerns within Kenya?
3. What role does HRH migration play in these concerns?

Examining the context of HRH in Kenya is a key step in determining trends and developments to date. As the unique aspects of the Kenyan health system are identified, potential solutions that would work in this unique context can also be construed. The results of this research are particularly timely as policy makers seek to resolve current HRH challenges. The findings are not only relevant for policy makers and practitioners in Kenya, but also those in similar contexts in SSA and around the world.

THEORETICAL CONSIDERATIONS & CONCEPTUAL FRAMEWORK

The findings of this research are analyzed from a complex adaptive systems theoretical perspective, and more specifically a systems thinking approach as proposed by the WHO (Gilson, 2012; WHO, 2009). Systems thinking is an approach to problem solving that views “problems” as part of a wider dynamic system and involves much more than reaction to present outcomes or events. It demands a deeper understanding of linkages, relationships, interactions and behaviours among elements that characterize the entire system (2009). Systems thinking places high value on

Chapter 2: Context of Migration of HRH in Kenya

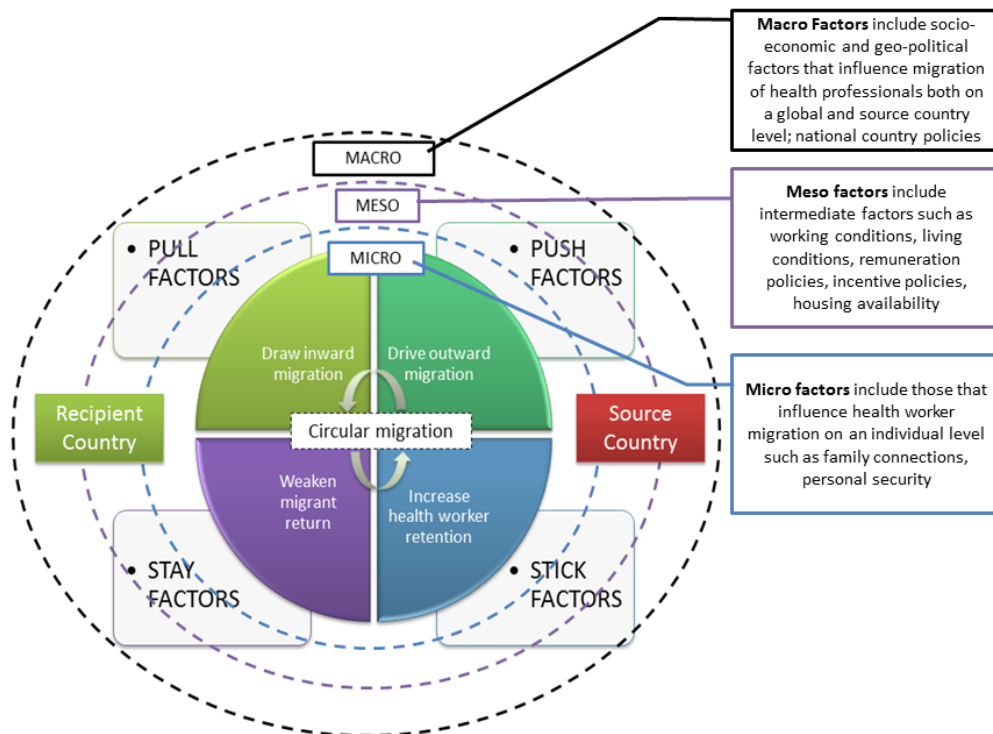
understanding the context by examining connections between parts, actors, and processes of the system (WHO, 2009). Some of the key characteristics of systems is that they are self-organizing, constantly changing, tightly linked, governed by feedback, non-linear, resistant to change and often counter-intuitive (WHO, 2009). This approach represents a paradigm shift from traditional ways of conceptualizing health care and health service delivery, to a broader definition of the health system. The findings in this paper represent recent trends and developments in the Kenyan health system with respect to managing of HRH such as recent policy developments, implementation of the HRH strategic plan, new policy initiatives from key informants.

In keeping with a systems thinking analysis, the findings are examined from a macro, meso and micro level. Within the health system, the macro level represents the global and national contexts, and includes policies, socio-economic and political factors that influence the health system (Gilson, 2012). The meso level represents local health system as well as the organizational levels. The micro level represents individuals in the health system including service providers, health professionals, patients and citizens (Gilson, 2012).

The study developed a conceptual framework to describe the context of migration of health professionals from a macro, meso and micro level for both source and destination countries. This framework builds upon two existing models on health systems and migration of health professionals (Gilson, 2012; Pillay, 2007). Gilson and colleagues developed a conceptual framework characterizing the health system using the above delineations (Gilson, 2012). While their model provides a strong foundation to explain the organisation of the health system, it is limited in its exploration of the factors related to the migration of health professionals. Pillay developed a conceptual framework that models the migration of health professionals particularly from the source versus recipient country perspective, including inward and outward migration, return migration and health worker retention from a push,

pull, stick and stay perspective (Pillay, 2007). This model does not take into account important dynamics at the macro, meso and micro levels. To resolve these limitations, the study reported on in this paper incorporates both models as well as the concepts of push, pull, stick and stay factors that influence HRH migration, as described extensively by EQUINET and Tjadens et al. (EQUINET, 2007; Tjadens et al., 2012).

Figure 2.1 Conceptual framework on migration factors



METHODOLOGY AND DATA ANALYSIS

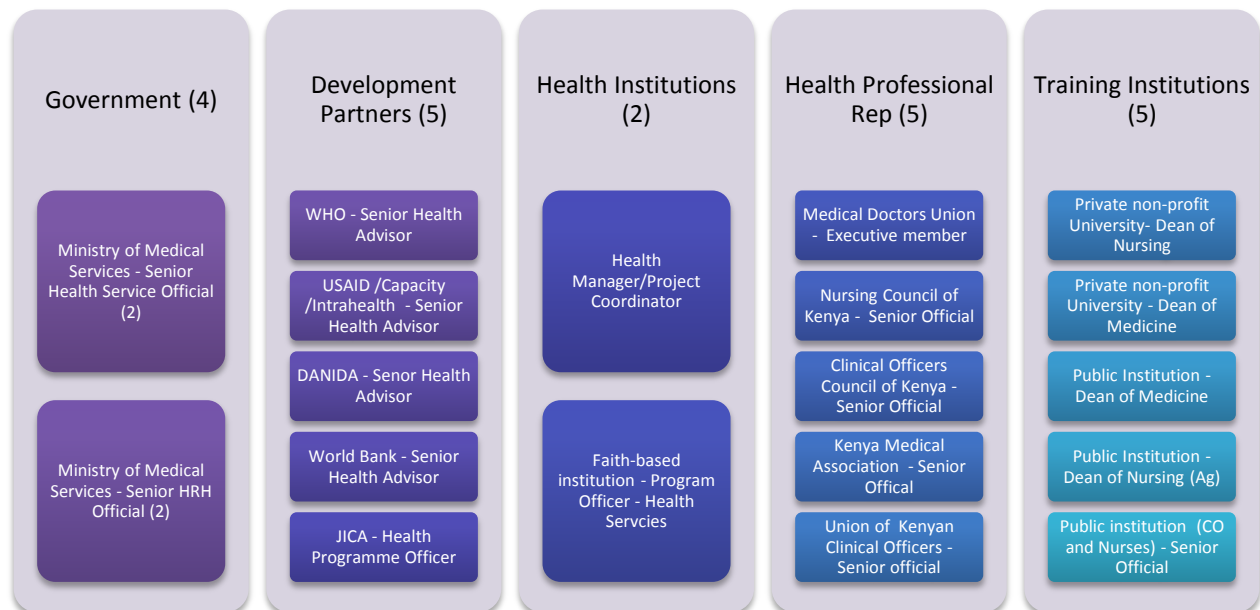
A mixed-methods approach was used for this research, including a documentary analysis, in-depth interviews with key-stakeholders and secondary descriptive data analysis from sources identified by the key-stakeholders. The objective of the documentary analysis review was to establish the knowledge areas as well as the knowledge gaps with regards to migration of health professionals with a specific focus on Kenya. Grey and peer-reviewed literature on migration of health professionals in Kenya

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and in SSA were analysed for trends and themes with particular emphasis on the period between 2005 and 2015.

Following the documentary analysis, in-depth key informant interviews were conducted with key-stakeholders through a snowball sampling technique, building upon the networks created during a pilot phase of the research (Creswell, 2003; Neuman, 2006; Tjadens et al., 2012). The objective of the in-depth interviews was to draw upon the institutional knowledge of key-stakeholders regarding their perspectives on migration of health professionals as well as actions that have been taken to address migration to date. Snowball sampling was chosen as this has been used effectively in a similar HRH stakeholder analysis study in Zambia (Hanefeld & Musheke, 2009). Overall, 21 interviews were conducted with key-informants and included perspectives from government (n=4), development partners (n=5), health institutions (n=2), health professional associations (n=5), and training institutions (n=5) both public and private. Interviews were conducted between August 2012 and February 2013. The full list of key informants is provided in Figure 2.2.

Figure 2.2: Matrix of interviews conducted with Key informants for Phase 1 of the research



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Secondary descriptive data were sought from the key informants in the form of reports and data tables, including but not limited to: Economic Surveys (2007-2015), Kenya Demographic and Health Survey, Kenya National Bureau of Statistics (various publications), Statistical Abstracts (2008-2015), Ministry of Medical Services Strategic Plan, Ministry of Public Health and Sanitation strategic plan, National HRH strategic plan (2008-12), Kenya Health Policy (2012-2030) and Kenya Human Resources Strategic Plan (2014-2018) among others (KNBS, 2008a; KNBS, 2008b; KNBS & ICF Macro, 2010; KNBS, 2010a; KNBS, 2010b; MOH Kenya, 2014; MOMS & MPHS Kenya, 2012; MOMS Kenya, 2008; MOMS Kenya, 2009; MOMS Kenya, 2010; MPHS, 2009; MPHS Kenya, 2008). Descriptive data tables were also generated using statistics from various organizations including the United Nations Development Programme (UNDP), United Nations Children's Fund (UNICEF), the World Bank and the World Health Organization (WHO). Content analysis was conducted on the documents from the stakeholders for differences, synergies and outliers, guided by the conceptual framework that was developed for this paper. The findings from the key informant interviews were also analyzed thematically guided by the conceptual framework, at macro, meso and micro levels, to explore factors related to migration among health professionals in Kenya.

Analysis of the interviews was conducted iteratively and deductively. A code of emerging themes and sub-themes was created and noted from the key stakeholder interviews a priori. After the transcription and translation of the interviews manual open coding and identification of recurrent themes was undertaken (Ritchie & Spencer, 2002). The themes were then narrowed and categorized with the key emerging themes identified. Transcripts were once again reviewed and a focused coding was conducted, comparing participants' responses with regards to specific themes (Hesse-Biber & Leavy, 2006). Common and recurrent themes were noted as well as outliers. The perspectives of the key stakeholders were placed in the context of the secondary data and documents collected as well as the

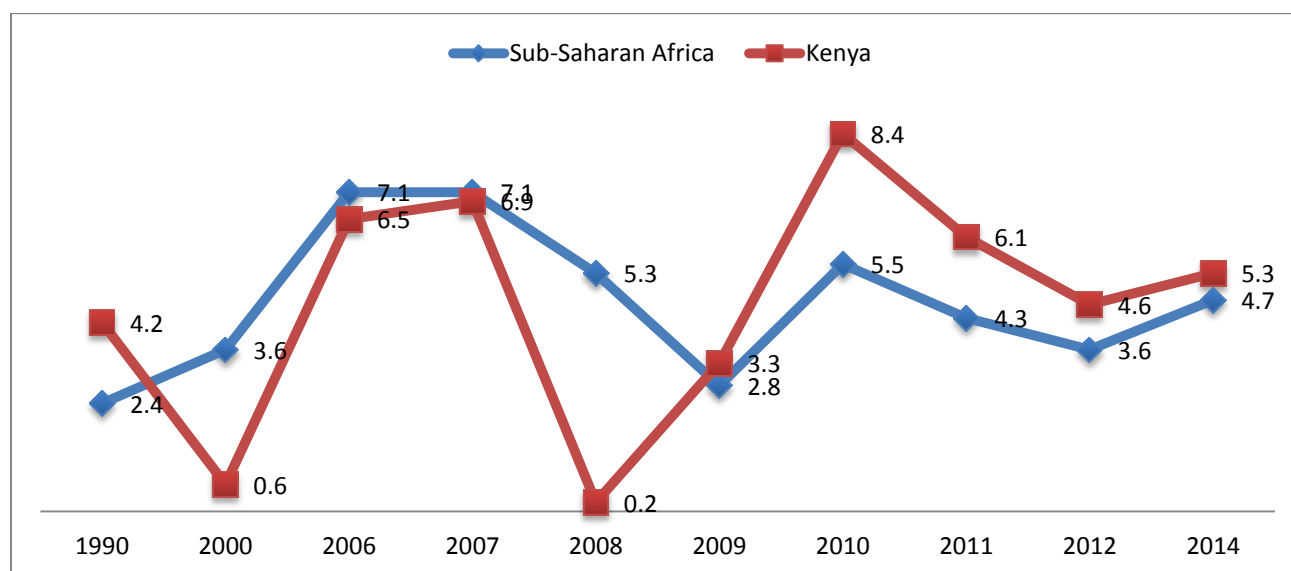
review of the literature. The overall findings were therefore triangulated to increase validity and reliability of the results.

FINDINGS FROM THE DOCUMENTARY ANALYSIS

Socio-economic and political context

Kenya is a significant country in the East Africa having the strongest economy in the region. The World Bank classed Kenya as one of the fastest growing economies in Africa. Kenya's Gross Domestic Product has also steadily grown over the past three decades as shown in the figure below (World Bank, 2015). The economy's strength and growth has been reinforced by its political stability and vice versa. For example, growth rates dropped between the 1990s and the 2000s from 4.2% to 0.6%. Politically at this time, Kenya was struggling under the dictatorship rule of President Daniel Arap Moi. This period was one of high levels of migration of health professionals particularly given other policies also in place, such as hiring freezes and reduced funding into the public sector and particularly in health and education. In the 2002 general election, President Moi did not present as a candidate, and Mwai Kibaki was elected as Kenya's third president. Under his leadership the ambitious vision 2030 policy was implemented, the impact of which is discussed further in this is paper. Kenya's economy experienced its highest growth rate in 2007 (6.9%). The disputed elections of 2007, however, resulted in a plummeting of the growth rate to levels lower than 1990s. Following peace agreements between the opposing sides, political and economic stability have gradually been restored and the economy continues to grow to date. Kenya's last general election in 2013 ushered in a new constitution and a new President, Uhuru Kenyatta.

Figure 2.3: GDP growth (annual %)



Source: World Bank Development Indicators (2016)

Kenya’s human development index indicator⁵ in 1980 was 0.404 and higher than the average for sub-Saharan Africa, and was 0.548 in 2014 as shown in Table 2.1.

Table 2.1 Human Development Index Indicators for Kenya, SSA and the World

Human Development Index Indicators	1980	1990	2000	2010	2014
Kenya	0.404	0.437	0.447	0.529	0.548
Sub-Saharan Africa	0.293	0.400	0.315	0.499	0.518
World	0.455	0.641	0.570	0.697	0.711

Source: UNDP Human Development Index Indicators (2015)

⁵ The Human Development Index (HDI) is a summary measure of average achievement in key dimensions of human development: a long and healthy life, being knowledgeable and have a decent standard of living. The HDI is the geometric mean of normalized indices for each of the three dimensions.

Migration flows and trends

Internationally, the Kenyan population is considered one of the top 10 among African diaspora (Oyelere, 2007). Of the 16 countries in East and Southern Africa, Kenya was second only to South Africa in the number of its physicians working abroad, with an emigration rate⁶ of 51%; the emigration rate for its nurses was lower than for most other countries (Mwaniki & Dulo, 2008). The top two health professional cadres in Kenya who migrate are doctors and nurses (Riley et al., 2007; Gross et al., 2011). In a study conducted to understand the impact of migration on service delivery, a random survey of health workers across the country and literature review revealed high intent to migrate among doctors and nurses, with a particular preference for the UK (Mwaniki & Dulo, 2008). Of the Kenyan nurses abroad, the largest proportion are in the UK, followed by USA, Canada, Australia, South Africa, and France, with a similar trend observed among doctors (Clemens & Pettersson, 2008).

Internally, migration flows follow the general trend of rural to urban, and public to private, and eventually internationally (Mwaniki & Dulo, 2008). The extent of circular migration and return migration has been little studied in the Kenyan context and is an area for further research. Anecdotally, there is an increasing trend towards return migration of younger health professionals, particularly in the context of increasing economic hardship in various destination countries. In 1994, the government of Kenya introduced a hiring freeze, which meant that graduating health professionals were not absorbed into the health system (Adano, 2008). The freeze resulted in an increase in migration of health professionals out of Kenya. Subsequently, for the few remaining health professionals, high workload, poor working conditions due to spending cuts, burnout, and frustration were rampant (Adano, 2008; Dogbey et al., 2012; Gross et al., 2010; Mwaniki & Dulo, 2008). In many institutions during the freeze period, staffing

⁶ Emigration rate in this study was calculated by dividing a factor called “emigration level” by the total number of nurses or physicians in the country and adding the emigration level and multiplying the overall number by 100. The authors used data adapted from Clemens et al (2008). Mwaniki and Dulo. (2008). Migration of Health Workers in Kenya: The impact on service delivery. EQUINET Discussion Paper 55. Available <http://www.equinetafrica.org/bibl/docs/Diss55KenyaHRMig.pdf>

was at half the required level, resulting in high unemployment rates among nurses and doctors, despite health worker shortages within the health system (Adano, 2008; Gross et al., 2010). The hiring freeze was abolished in 2007, and since then, the Kenyan government has engaged in a number of emergency hiring drives to attract health professionals into the public health system (Adano, 2008; Dogbey et al., 2012; Gross et al., 2010). The challenge with emergency hiring programs is that they address the short-term requirements for health professionals, but do not address longer-term requirements. Strategic planning, forecasting of present and future needs in service delivery, and adequate training are required to ensure the long-term sustainability of the efforts to increase and maintain the health professionals within the public and the private health system.

Impacts of Migration

Migration has had a number of impacts in the Kenyan context that have been captured in the literature. In their study on the cost estimate of health professionals' brain drain in Kenya, Kirigia and colleagues found that the average cost for a five year training program per nursing student was approximately US\$ 16,901, or \$25,352 including living expenses and accommodation (Kirigia et al., 2006). The cost estimates for doctors was US\$ 43,180 and US\$65,997 respectively. They are several limitations to their methodology, for example, inclusion of primary education in the costing; this study highlighted the economic loss of investment when a health worker migrates internationally.

There are knowledge gaps regarding similar economic losses due to internal migration, migration to the private sector, and migration outside of the health sector. A study on financial and non-financial incentives for health workers in Kenya found that incentives were not uniformly applied, with doctors and nurses benefiting the most (Ndetei et al., 2008). Junior cadres with basic qualifications were often posted to work in public facilities and district hospitals, were paid low salaries, and did not qualify for most of the allowances including travel allowances. These junior cadres had limited access to financial incentives that their more-qualified peers received (Ndetei et al., 2008).

Policy developments and responses

Kenya has undertaken a number of policy responses in order to address its current HRH crisis.

There have also been a number of policy developments that indirectly influence the migration and HRH context of Kenya.

Macro policy responses and developments

Vision 2030

In 2003, an ambitious long-term development policy seeking to transform Kenya from a low income country to a middle income country, Vision 2030, was launched by the Government of Kenya (Dogbey et al., 2012; Government of Kenya, 2007). Vision 2030 is based on three main pillars: economic, social, and political developments. The social policy prioritized health, and called for increased training and hiring of health professionals among other priorities (Dogbey et al., 2012; Government of Kenya, 2007). Vision 2030 also prioritized other non-health sector investments that may improve the health care system including Free Primary Education (FPE) and investments in infrastructure (Dogbey et al., 2012). This document continues to guide the socio-economic and health policy context in Kenya to date, and is referenced in practically all subsequent policy documents. While not directly related to migration nor health professionals, it shapes the health policy context within which migration takes place.

New constitution (2010)

In August 2010, a new constitution was promulgated in Kenya, the first major legislative change since independence in 1963. Enshrined in the new constitution is the right to “the highest attainable standard of health” under article 43 (1) (a) (Government of Kenya, 2010). That health is a right, protected under the constitution, places onus on the government to ensure access to services, and provides a space for citizens to demand that right. The new constitution also allows for citizens to hold dual citizenship, which has the potential to encourage and promote circular migration of health care professionals between Kenya and various higher income countries. The new constitution devolves

Chapter 2: Context of Migration of HRH in Kenya

governance, through the development of counties, and under article 174 allows counties to staff their health care institutions. This may positively impact redistribution of health professionals if counties offer competitive packages to health professionals in various parts of the country. Following the elections held in 2013, Kenya reorganised civically around counties, and the governance of the health system has since changed. As the key informants were interviewed before the implementation of these changes, the current restructured health system is not considered in this paper.

Finally the constitution allows for freedom of association and formation of unions. Prior to the new constitution, health professionals were not allowed to form unions. Kenyan doctors, dentists, and pharmacists, now allowed to do so, formed a union in 2011– the Kenya Medical, Dental Practitioners and Pharmacists Union (KMPDU). This union, which is legally registered with a membership of over 4,000 doctors, provides a new and powerful forum for presenting health professionals’ perspectives to the government. Nurses and clinical officers are currently in the process of seeking to register official unions.

Health Policy (2012)

Kenya has recently developed a comprehensive Health Policy that covers the period 2012 to 2030 (MOMS Kenya. & MPHS Kenya., 2012). This document outlines key policy reforms targeting economic development in health, as outlined in the Vision 2030, and health as a human right, as outlined in the Constitution of 2010 (MOMS Kenya. & MPHS Kenya., 2012). Six priorities are set out in this policy document: equity in distribution of health services and interventions, people-centered approach to health and health interventions, participatory approach to delivery of interventions, multi-sectoral approach to realizing health goals, efficiency in application of health technologies, and social accountability (MOMS Kenya & MPHS Kenya, 2012 pg.19). The implementation of the health policy calls upon high level macro-level actors, including senior officials both in the health sector and outside the health sector, and meso and micro level actors at the individual, household and community levels.

Bilateral Agreements on HRH Migration

At a macro policy level, there are also bilateral agreements between governments to manage migration of health professionals. One such agreement was between Kenya and Namibia through a Memorandum of Understanding, allowing for temporary movement of health workers from Kenya to Namibia upon request from Namibia (Pagett & Padarath, 2007). The agreement was put in place due to Kenya's inability to absorb all of its health workers into the public system (Pagett & Padarath, 2007).

Meso policy developments and responses

At the meso level, the government has developed a number of responses including an emergency hiring program in 2007 (Adano, 2008). The program was set in place by USAID's Capacity project in consultation with the then Ministry of Health with the goal of hiring an estimated 5000 nurses, 1000 clinical officers, and 1200 laboratory staff who were unemployed and potentially available for hire (Adano, 2008). By 2008, 830 staff had been hired through the program (Adano, 2008). More recently, Kenya has carried out a similar emergency hiring plan through an economic stimulus package to recruit 4200 nurses, 20 for each of the 210 constituencies, with the support of the Danish International Development Agency (DANIDA) (Dogbey et al., 2012). As previously noted, emergency hiring plans tend to not address long term planning for HRH as salaries of health workers do not constitute the core health budget.

HRH Strategies (2009-2012; 2014-2018)

In 2009, the then two health Ministries – the Ministry of Medical Services (MOMS) and the Ministry of Public Health and Sanitation (MPHS) – jointly developed Kenya's first Human Resources for Health Strategy with support from the USAID/Capacity project, providing a basis for future planning (MOMS Kenya, 2009). The Strategy outlined five outcome target areas: 1) appropriate and equitably distributed health workers in post; 2) improved attraction and retention of health workers; 3) improved institutional and health worker performance; 4) strengthened human resources development systems and practices 5) strengthened HR management and planning (MOMS Kenya, 2009). The first two

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outcome areas address distribution, attraction and retention of health professionals and involve strengthening and scale up of recruitment and deployment, and improving the attractiveness of health sector jobs with particular emphasis on hard-to-reach areas (MOMS Kenya, 2009). As with most policies, the impact of these initiatives are yet to be felt; this policy does represent a major step in addressing the challenge of HRH maldistribution and improved health care access for rural populations.

A new HRH strategy developed after the data collection and key informant interviews was completed for this research; it was released in December 2014 (MOH Kenya, 2014). The new strategy explores internal, and to a lesser extent, international migration of health professionals. Data were only captured on nurse migration, with the finding that the USA had the largest number of Kenyan nurses in 2009 (MOH Kenya, 2014). International migration is barely discussed in this health policy document, and little direction is provided as to how future out-migration of health professionals may be addressed.

Micro policy developments and responses

Direct salary increments and direct incentives are some of the promising practices to engage and retain health workers. Although such financial incentives could be considered a meso level policy decision, the effect on migration decision-making remains at the micro level of the individual health worker. In 2002, the Government of Kenya introduced payment of non-practice, risk and extraneous allowances to doctors in the civil service (Joint Learning Initiative, 2004). Limited practicum sites and a lack of pay during internships was a previous impediment to retaining nurses. In 2008, a decision to pay these unpaid nurse interns who were undertaking practical work in order to qualify, was made, and received positive response that will likely add to the attraction of nursing as a profession (Stilwell & Campbell, 2008).

Summary from the documentary analysis

A number of key developments have taken place in the Kenyan context of HRH including the development of new health policies, lifting of a hiring freeze and development of human resources strategies in the health sector. While the impact of these changes has yet to be fully experienced, Kenya has positioned itself to address the shortages of health professionals through planning and projection of current and future needs. Information is required on the distribution of health workers from rural to urban, public to private and between countries so as to capture the extent of international migration of health workers in Kenya. For instance, there is no centralized repository for information on migration of health professionals, HRH, or data on health workers in the context of Kenya. Further analysis is also required to improve on the understanding around the linkages in migration of health workers.

The international migration of health professionals continues to be an area that is marginally addressed in the policy documents. This requires attention to ensure that complacency of this type of migration does not lead to an exacerbation of the shortages of health professionals. Table 2.2 summarises what we know and the knowledge gaps with respect to HRH migration in the context of Kenya.

Table 2.2: Summary of what we know and knowledge gaps on migration of health professionals in Kenya

	What we know about HRH migration in Kenya	Knowledge gaps
Macro Level	<ul style="list-style-type: none"> ▪ New policies on HRH including HRH strategy 2009-12 and 2014-18; ▪ New health policy (2012-2030); ▪ New constitution (2010) which includes the definition of health as human right ▪ Continuing relevance of Vision 2030 and the orientation of economic and social development as a pillar of government policy 	<ul style="list-style-type: none"> ▪ Impact of the new policies on access to health professionals internally for the general population ▪ Implementation or progress on the implementation of the macro policies ▪ Impact of global policies such as the WHO Code on the International Migration of Health professionals
Meso Level	<ul style="list-style-type: none"> ▪ Migration trends for health professionals are from rural to urban, public to private, and eventually international. ▪ Top migration destination is the USA 	<ul style="list-style-type: none"> ▪ Scope of international migration of health professionals apart from limited data on nurses in Kenya ▪ Data on return and/or circular migration; reasons for return migration

What we know about HRH migration in Kenya	Knowledge gaps
<ul style="list-style-type: none"> for nurses ▪ Devolution of health service delivery to the county-level as outlined in the Constitution of 2010. 	<ul style="list-style-type: none"> ▪ Changes to working conditions and/or infrastructure and the impact on migration decisions of health professionals ▪ Impact of devolution on access to health professionals and service delivery
Micro level	<ul style="list-style-type: none"> ▪ Impact of macro policies on individual health professional migration choices

FINDINGS FROM THE KEY INFORMANT INTERVIEWS

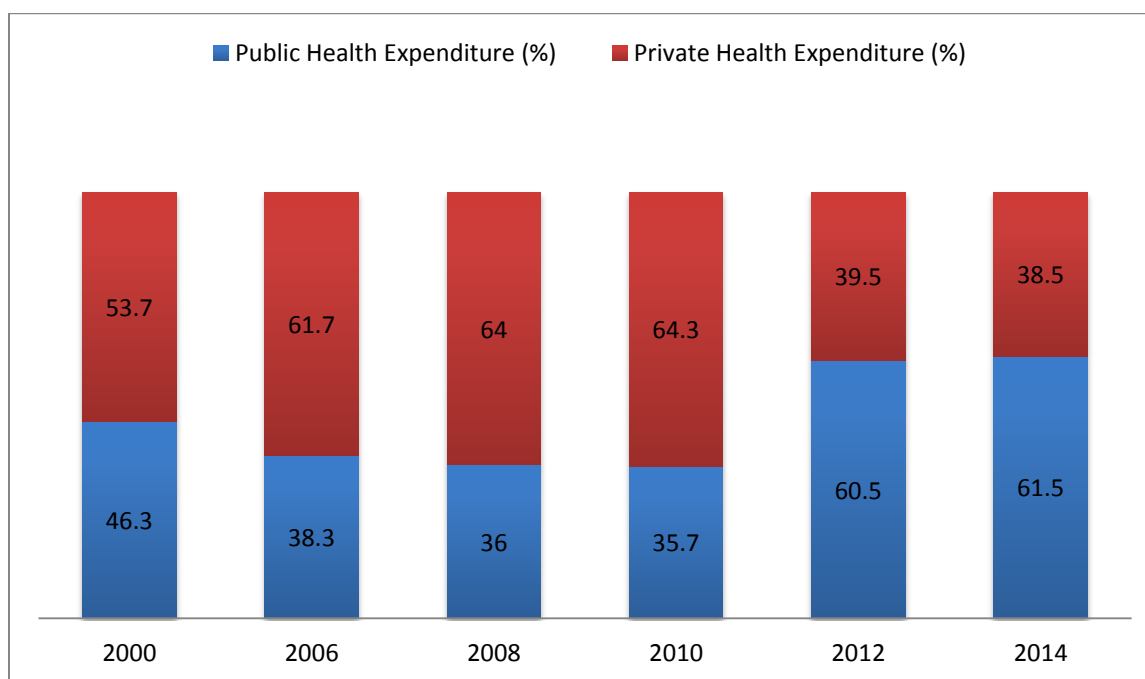
The key informant interviews as well as the secondary descriptive data provided by the key informants provide in-depth insights into the current context of HRH in Kenya. The key questions that the interviews sought to answer were: 1) How have HRH concerns and HRH migration changed over time? 2) What are the key current HRH concerns within Kenya? 3) What role does HRH migration play in these concerns within Kenya? The ensuing section summarizes the findings to these questions, contextualizing responses by reference to secondary descriptive data.

1. How have HRH concerns changed over time?

Health financing and expenditure on health

At a macro level, there has been an overall increase in the financing of the health sector following the implementation of the Vision 2030 policy. Kenya’s public expenditure on health as a percentage of the total health expenditure has increased significantly as shown in Figure X below. As of 2012 when the key informant interviews were conducted, the overall public expenditure on health had increased to 60.5% of the total expenditure on health. In 2000, the health expenditure was 10.6% of overall government expenditure compared to 13.4% in 2012 (World Bank, 2016).

Figure 2.4: Public and private expenditure on (% of Total Health Expenditure)



Source: World Bank Development Data (2016)

Developments in supply of health professionals

There has been a steady increase in the number of registered health workers since 2006 both absolute numbers and density/population as shown in Table 2.3. In 2006, there were 5,889 medical doctors, 10,905 registered nurses and 5,285 clinical officers registered; compared to 9,149 medical doctors, 41,371 registered nurses and 15,960 clinical officers in 2014. During the same period the population was 37 million and 45 million respectively.

Table 2.3: Number of registered medical personnel in Kenya (2006-2014)

Cadre	2006		2008		2010		2012		2014	
	No.	Dens.	No.	Dens.	No.	Dens.	No.	Dens.	No.	Dens.
Doctors	5,889	16	6,623	17	7,129	19	8,092	20	9,149	21
Dentists	898	2	974	3	898	2	985	2	1,090	3
Pharmacists	2,697	7	2,860	7	3,097	8	2,532	6	2,355	5
Pharmaceutical Tech.	1680	5	1,815	5	2,233	6	5,236	13	7,041	16
BSc Nursing	-	-	657	2	988	3	1,532	4	2,418	6
Registered Nurses	10,905	30	14,073	37	29,678	77	35,148	86	41,371	96
Enrolled Nurses	31,917	88	31,917	83	34,282	89	26,621	65	27,186	63

Chapter 2: Context of Migration of HRH in Kenya

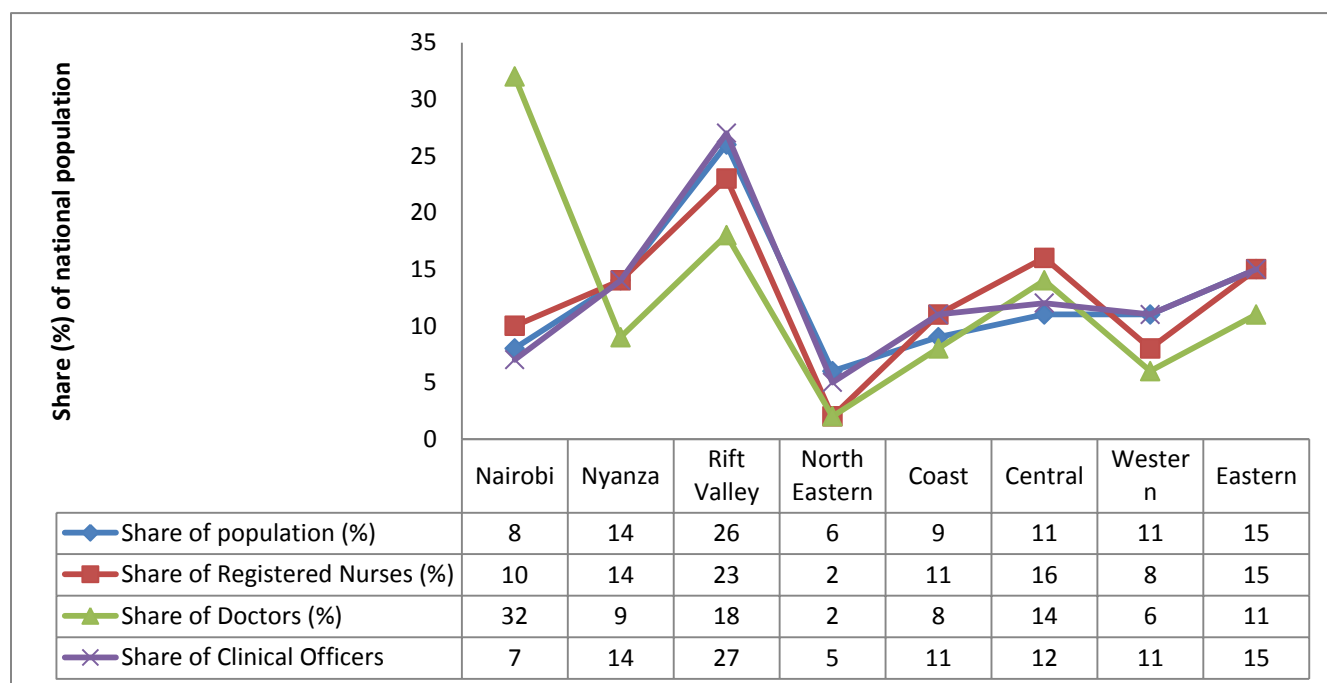
Clinical Officers	5,285	15	5,035	13	8,708	23	11,185	28	15,960	37
Public Health Officers	1,457	4	6,960	18	7,429	19	8,069	20	9,039	21
Public Health Technicians	5,969	17	5,969	16	5,969	16	5,969	15	5,969	14
Total	66,697	185	76,883	203	100,411	262	105,369	259	121,578	282

*Source: Economic Surveys 2006-2015; Health Management Information System, Ministry of Health * No. refers to the number of health professionals; Dens. refers to number per 100,000 population; BSc Nursing Data not available for 2006.*

Distribution of health professionals

The density of clinical officers per 100,000 has more than doubled from 2006 to 2014. While the absolute numbers of health professionals have gradually increased, the overall density of health professionals per 100,000 population has remained fairly steady for the main health cadres except for registered nurses and clinical officers who have increased more significantly than other cadres over the past decade. Despite the overall increase in numbers of health professionals, there persists an urban skew to their distribution. Thirty two percent of doctors are located in Nairobi yet only 8% of the population lives there as shown in Figure 2.5 below. On the other hand, North Eastern, a mostly rural and arid province had only 2% of doctors despite having 6% of the share of the population. Distribution of other cadres matches for the most part, the share of the national population. Up until February 2013 when the data for this research was collected, Kenya was organized by provinces. Following the general elections in March 2013, Kenya has since been reorganized around 47 counties as mandated in the constitution that was promulgated in 2010. The provincial distribution above still provides a useful sense of the geographical distribution of health professionals particularly around Nairobi, the capital of Kenya. The county distribution of health professionals on the other hand will provide a more nuanced sense of the challenges in providing health services to the diverse rural populations.

Figure 2.5: Provincial distribution of selected public sector personnel (share of national population)



Source: Adapted from National HRH report 2010

Although there was an overall increase in the number of registered medical personnel between 2006 and 2014, the current numbers are not sufficient to support the population’s needs.

Training of health professionals

There have been a number of developments in numbers of health professionals in training from 2004 to 2015 as shown in Table 2.4 below. The training of Clinical Officers has more than doubled from 2004-5 to 2014-15, while the increase in doctors has been modest from 2,177 in 2004-5 to 3,279 in 2014-15. Doctors’ training takes 5 years compared to Clinical Officers’ training that takes 3 years so a higher increase would be expected for this cadre.

Table 2.4: Number of health workers in training in Kenya (2004-2012)

Type of Personnel	2004-5	2006-7	2008-9	2010-11	2012-13	2014-15
Doctors	2,177	2,098	3,172	2,412	3,170	3,279
Dentists	147	144	152	194	268	369
Pharmacists	266	284	339	383	466	969
Pharmaceutical Technicians	142	137	509	298	444	610
BSc Nursing	349	382	731	1,667	2148	3979
Registered Nurses	1,342	2,035	1,847	2,200	2224	2702
Enrolled Nurses	4,015	107	-	128	276	509
Clinical Officers	633	1,038	1,509	1,184	1262	1583
Public Health Officers	233	350	666	519	1080	751
Public Health Technicians*	254	-	-	-	-	-
Total	9,558	6,625	8,925	8,985	11,338	14,751

Source: Economic Surveys 2006-2015 (KNBS); *Training of Public Health Technicians is being phased out

With respect to nurse training, there has been an over ten-fold increase in the training of nurses at the Bachelor level, while enrolled nursing training has steadily decreased since this cadre is being phased out. The enrolled nurse cadre is a diploma level of nurse training that entails a 3 year program (Gross et al., 2011). It is currently being phased out to be replaced by the 4 year Bachelor of Nursing program.

Prior to 2007, there were only two public universities that trained doctors – University of Nairobi and Moi University (MOMS Kenya, 2010). Since then, the number of both public and private institutions training medical doctors and other health cadres has increased significantly (MOMS Kenya, 2010). Allied health workers are mostly trained through the Kenya Medical and Training College (KMTC), which as satellite campuses all over the country. KMTC produces the largest number of health professionals each year; in 2009, KMTC produced 4,957 graduates (MOMS Kenya, 2010). Table 2.5 summarizes the key health training institutions and cadres trained.

Table 2.5: Key health training institutions and cadres trained

Health Training Institution	Cadres Trained
Kenya Medical Training College (KMTC)	Clinical offices, nurses, lab technicians
Nairobi University Medical School	Doctors, Dentists, Pharmacists, Nurses, Medical Specialists
Moi University Medical School	Doctors, Nurses
Kenyatta University Medical School	Doctors, Pharmacists, Nurses, MPH, Health Records and Information Management, Medical Laboratory Sciences, Health Services Management
Egerton University Medical School	Doctors, Pharmacists, Clinical Officers
Kenya Methodist University (KEMU)	Nurses, Clinical Officers
Great Lakes University of Kisumu (GLUK)	Nurses Clinical Officers, MPH
FBO Pre-service nursing schools e.g. PCEA Tumu tumu and Kendu Adventist	Nurses, Clinical Officers, Lab technologists
Aga Khan University Hospital	Nurses, Medical Specialists
Nairobi Hospital	Nurses
Baraton University	Nurses

Source: MOMS Kenya Annual HRH report 2010

Key informants also concur that these efforts have had a positive impact on the training, particularly for Clinical Officers.

“[Clinical Officers] now have another program called BSc in Clinical Medicine. Although public universities have not started offering that, we have Mount Kenya University, a private university and we are in serious discussion with Nairobi University [public university] to start offering some of these degrees. – KI Interview 18, Clinical Officers Training Institution Senior Official

“We worked with the Clinical Officers’ Council to develop a good curriculum which is now approved and which universities have adopted for a BSc in Clinical Services.” – KI Interview 7, Development Partner Senior Health Official

2. Key HRH concerns in Kenya

Supply of health professionals

The stakeholders generally agreed (18 of 21) that there were insufficient health professionals in Kenya to meet the population needs, congruent with the WHO assertion that Kenya is facing a critical shortage of health workers. Key informants acknowledged that there have been increases in the numbers of health professionals trained, but noted that shortages still persist.

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“Clearly we don’t have enough of anything” – KI Interview 6, Dean, Private not-for-profit Medical School

“We still have a very big shortage, especially when it comes to nursing, clinical medicine...we have a big shortage in their sector” – KI Interview 18, Clinical Officer Training institution Senior Official

“...the number of nurses we are producing are not adequate for our services. If you by the WHO ratio of 200 per 100,000 and you’re looking at the population of Kenya let’s say it is 40 million and we have only 30,000 nurses...we are operating at like 50%...I think we just don’t have enough numbers” – KI Interview 4, Nursing health professional representative

Shortages were characterized as both a lack of sufficient numbers of trained health professionals:

“We are not training enough because we are still crying of shortage...we are still talking of shortage...and of course we are training nurses and doctors but they are not enough...we are not actually training enough.” – KI Interview 21, Faith-based organization representative

And, paradoxically, a simultaneous lack of employment opportunities for graduating health professionals:

“ [for] the nurses who are being trained now, there is no guarantee that all are being employed...there is unemployment and there is underemployment and that is what is creating the shortages” – KI Interview 5, Dean of Nursing, Private Not-for Profit University.

“In terms of the numbers overall, the feeling is that we are producing more than we actually are able to consume, so Kenya is unique in terms of that, I think it is one of the few African countries whose production capacity is higher than its consumption capacity. It is a bit of a misnomer because we are producing more than we can consume, but we still have gaps on the ground” – KI Interview 1, International Development Partner

The clinical officer stakeholders felt that Clinical Officers had the least employment opportunities and were an underutilized resource, despite the large number being trained.

“There are more than enough Clinical Officers trained every year. However, there is no strategy for them to be employed. Health centers should be under the care of Clinical Officers...there are more than 3,500 dispensaries needing more than 2 clinical officers each but they are not absorbed. The government doesn’t absorb them” – Unregistered Union of Kenya Clinical Officers, President.

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The supply and the shortages of health professionals were a key concern raised by the key informants. The general perspective from stakeholders was that there are employment opportunities for doctors, but not for nurses, a point particularly asserted by nurse stakeholders. This is likely related to the developments in health policy at a macro and meso level over the past decade, including the HRH strategic plans in the context of Kenya.

Lack of employment opportunities for health professionals

As noted above, one of the most critical challenges identified by key informants is that despite the increase in the number of training institutions, health professionals are not adequately absorbed into the health system.

“We know that there is still a big shortage...a number of them stay unemployed for quite some time because the government may not have enough resources to meet their salaries...we train them [and] they stay in the field looking for employment. – KI Interview 18, Clinical Officer Training Institution Senior Official

There was no agreement on whether the issue was insufficient training opportunities or lack of absorption post-training into paid positions. On the one hand there was a sense that there were many more applicants than there were training opportunities, particularly with regards to training of Clinical Officers:

“...if you look at the number of applicants we receive on a yearly basis, we take just about 20-30% because of the lack of capacity to accommodate everybody...but even if we train, few are absorbed” – KI Interview 18, Clinical Officer Training Institution Senior Official

On the other hand, and from the perspective of the key informants from public institution, there were enough students trained but a lack of job opportunities fostered the HRH shortage. Health professionals' unwillingness to work in rural areas was also raised as an issue:

“I think the issue is not training. We are training if I would say more than enough. The problem comes in deployment and also in staff welfare issues...the Ministry of Health have tried to bring in programs to oversee the deployment of nurses and midwives and also other health workers in general. The only problem is that when it comes to deployment, many of [health workers] don't like

working with the government, they like working with the private sector...and that brings a bit of a shortage especially in the rural setup” – KI Interview 5, Dean of public nursing institution

Maldistribution, attraction and retention

Key informants considered maldistribution, attraction and retention to be persisting challenges compromising health service delivery and access, particularly for rural based populations who constitute over 75% of the Kenyan population.

“Retention is a big priority issue for government... our problem is attraction to rural postings and attraction to hard-to-reach areas” – KI Interview 1, International development partner

To address issues around retention, the government introduced housing allowances and other financial incentives, particularly in hard-to-reach areas:

“Most people prefer to work in towns and urban centres for obvious reasons – security, family, education...we have introduced a number of incentive schemes to improve on retention in hard-to-reach areas such as housing allowances and enhanced allowances” – KI Interview 20, Senior Health Government Official

From the health professionals’ perspective, there is a strong commitment to serve the population despite the challenging working conditions.

“I’ll talk about the public sector. I think there is a strong feeling of serving our people...when you are practicing in public sector medicine there is no doubt that you are serving the people. I mean most of our patients are poor, our facilities are minimal, our people are very sick...they really feel like they are serving.” – KI Interview 2, Health professional representative

Thus, while there was a general sense that training of health professionals had improved in terms of number of institutions, shortages persist due in large measure to a lack of paid positions and difficulties recruiting into under-resourced rural areas. Migration was not identified as a current concern with respect to HRH in Kenya, an issue returned to later in this paper.

3. Role of migration in key HRH concerns within Kenya: Problem Solved or Still Persisting?

The key informants generally agreed that although international migration from Kenya was a major problem in the 1990s through to the mid-2000s, it was no longer a major HRH issue. This was a

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recurring theme mentioned by almost all the stakeholders, particularly by government informants and development partners, and is consistent with findings from the Mobility of Health Professionals Study (Dogbey et al., 2012). At a policy level, migration is not viewed as a major challenge partly due to lack of evidence and because political priority is now being given to non-health issues. One of the arguments presented is that the government has played a role in this overall reduction of migration of health professionals:

“At policy level [migration] is not seen as a big priority policy issue. I can tell that in HRH discussions, it is a low priority discussion.” – KI Interview 8, International development partner

“There has been a drastic reduction in resignations of health professionals...there are now favourable terms and conditions of services. The government is the best employer” – KI Interview 20, Senior Government Health Official

It is challenging to establish the extent to which out-migration is occurring from Kenya as there are limited data on the phenomenon. Currently the Nursing Council of Kenya is the only body that tracks the numbers of HRH (in this case nurses) who are leaving the country through requests for verification of their credentials. The lack of HRH migration data was similarly noted in the Mobility of Health Professionals Study (Dogbey et al., 2012).

“There is the generic perspective that migration is bad and that it is draining the capacity of the country ... the problem is that we don’t have hard data at present with regards to Kenya on whether this is actually a true perspective... so really the issue of migration seems to be more of an academic discussion because we don’t have any hard data” – KI Interview 8, International development partner

From the limited data that are available, it appears that there has been a significant decline in the numbers of health professionals migrating since 2003, particularly evidenced through the reduction in number of nurses migrating. Data from the Nursing Council of Kenya supports this assertion as shown in Table 2.6, provided by one of the key-stakeholders.

“I think we just don’t have enough numbers because we have not managed to keep people around. But the story that we used to have 4 years ago was like we are producing so many and

they are not being absorbed, that story does not hold a lot of water today.” – KI Interview 4, Nursing Licensing Body Senior Official

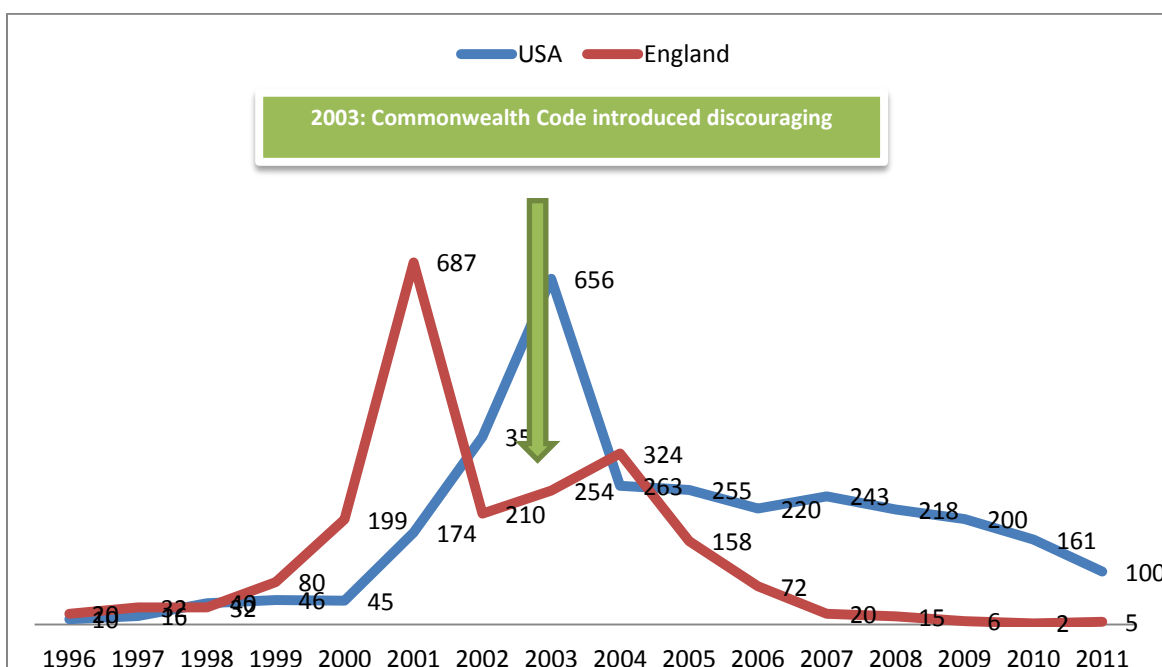
Table 2.6 : Nurses verified to apply for registration to top 5 destination countries (1993-2011)

Country	1993	1998	2003	2008	2011
USA	6	40	656	218	100
England	20	32	253	15	5
Australia	1	1	11	25	30
Canada	1	4	3	35	20
South Africa	2	10	-	2	3

Source: Nursing Council of Kenya 2012

There was a peak in the request for verification of nurses between 2001 and 2003 to the UK and the USA respectively, followed by a steady decline in the numbers (NCK 2012). As of 2011, there have been only five requests for verification to the UK compared to 100 to the USA as shown in Figure 2.6. This could be attributed to the global policy changes to the context of migration of health professionals. The Commonwealth Code for example was introduced in 2003, discouraging active recruitment to the UK (Buchan et al., 2009).

Figure 2.6: Number of Kenyan nurses verified to apply for registration the USA and England (1996 -2011)



Source: Nursing Council of Kenya 2012

A contrasting perspective from that of the government and development partner informants was that of health professional representatives and training institutions. These informants felt that migration was still a key issue that should be addressed as a policy priority, lest the health professionals continue to leave and fail to return to Kenya.

“Migration is a big, big problem and the reason why is because they never come back...Doctors are willing to go even to Sudan. You need job satisfaction, you work many hours, so if I can’t manage to handle the work and I’m thinking about my bank loan, then I’d rather leave the country...people who go to the UK for example never come back.” – KI Interview 2, Health professional representative, Senior Official.

“Migration is still a problem, it is still a big problem...because everybody is looking for greener pastures” – KI Interview 14, Dean public nursing institution

The Dean of the oldest public medical school noted that younger health professionals are more likely to migrate compared to the older ones, particularly those younger health professionals who have been trained using public funds which creates a loss to the system overall:

“The government borrows money to educate young people and yet the debt to the countries they borrow from such as the UK and the US remains but the people they invested in [then] migrate to the same countries.” KI Interview 16, Dean of Medicine – Public Institution

“It’s expensive to train health professionals and so every dollar invested on training health professionals who then go away is a lost opportunity for the country and so [migration] is clearly an issue...it is definitely a problem” – KI Interview 6, Dean of Medicine, Private Not-for Profit University.

Key informants generally noted that there had been positive developments with respect to working conditions for health professionals over the past decade, particularly in the public sector compared to the private sector.

“...administration is better in government than in private. [In private] you are not allowed to go to school, you are not allowed to do many things and they use you to the maximum and job security is not good” – KI Interview 11, Senior Health Government Official

“...you find that if [Clinical Officers] are given the option to choose whether to work with the public sector or private, they would rather opt to go to public...because it is much safer. You may

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be getting a little at the end of the day but if you look at the whole package, the retirement package, the public sector is still much better.” KI Interview 18, Clinical Officer Training Institution Senior Official

“I can say without contradiction that there is no sector that pays doctors better...I even know doctors who left [government] and are willing to come back” KI Interview 20, Senior Health Government Official

The government was considered to be the ‘best employer’ by a number of key informants for offering career development opportunities and job security to health professionals compared to the private sector. This perspective was shared not only by government officials but also by development partners and training institutions. Key informants referred to these improvements with regards to doctor salaries; little was mentioned about nurse or clinical officer salaries and/or working conditions.

“Right now the government is the best employer!” – KI Interview 20, Senior Health Government Official

“You know government is now the best payer of doctors in Kenya. It pays better than private sector surprisingly” – KI Interview 7, International Development Partner

There was a sense that health professionals are seeking to put into practice what they learned during their training and that they would remain in Kenya if they found the right working conditions, despite their salary concerns.

“If you give [health professionals] an opportunity to practice in a way that they would like to practice then why would people go to cold Canada?” – KI Interview 6, Dean of Medicine, Private not-for-profit

“Remuneration was the last thing on [health professionals’] minds...the working environment was number one, if they have the right working environment they will not migrate” – KI Interview 11, Senior Government Official

There have therefore been a number of HRH developments at multiple levels in Kenya over the past decade, changes which have undoubtedly had an impact on HRH priorities and factors related to migration of health care professionals.

DISCUSSION

At a macro level, Kenya's economy has grown and continues to grow particularly in recent years (World Bank, 2016). At the same time, several key policy developments have improved the overall outlook for health professionals in Kenya over the past decade. Kenya has undergone two iterations of the HRH policy, as well as the development of an overall health policy defining the future priorities for the health system. One of the strategies identified by the WHO in the 2006 World Health Report is the development of health workforce strategies with strong leadership from national governments (WHO, 2006 pg. 120). This priority is reiterated in strategy 1 of the Kampala Declaration and Agenda for Global Action which calls for national governments to build "coherent national and global leadership for health workforce solutions" in part through development of comprehensive costed health plans addressing health workforce strategies specifically (WHO, 2014b) (pg. 14). To this end, there has been an increase in allocation of resources to the public sector and in particular to the health sector; public expenditure on health surpassed private expenditure on health in 2012. Kenya is making progress towards achieving these high level goals, compared to 2006, when it was identified as a country facing a critical HRH shortage. At a macro or international policy level, there have been developments such as the WHO Code on the International Recruitment of Health Personnel, and prior to this, the Commonwealth Code on migration (Buchan, 2010; Dumont, Zurn, Church, & Thi, 2008). While this research did not explore the impact of such policies directly, it is likely that they have had an impact on migration, especially of Kenyan health professionals immigrating to the UK.

At a meso level, there have been improvements particularly related to terms of employment of health professionals in Kenya in comparison to the mid-1990s, when health professionals, particularly doctors and nurses, were exiting the public health system either to the private system within Kenya or to other countries (Adano, 2008). Key informants now describe the government as the 'best employer'

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offering job security and better working conditions compared to the situation from a decade and a half ago. This is a positive departure from migration trends described by Mwaniki and Dulo, who found that health professionals were more likely to migrate from the public to the private sector (2008). These changes seem to be restricted to doctors, possibly due to their ability to lobby the government for better conditions through better representation. Nurse recruitment in the public sector has also been on the rise, although this has been sporadic. Clinical Officers do not seem to enjoy similar benefits, also do not have the same migration options as their counterparts, which as a later paper from this study suggests may be interrelated phenomena.

An emerging theme from the research was the fact that migration was no longer considered a priority area, particularly from the perspective of government and development partners. This could be attributed to a lack of sufficient supportive data to highlight the concerns associated with migration with respect to health care professionals (Tjadens et al., 2012).

From a systems thinking perspective, there are various elements that are involved in improving the overall functioning and conditions within a health system including financing, service delivery, human resources, medicines and technology, governance and information. Over the past decade, Kenya has made strides in the overall financing of the health system through leadership and governance resulting in increased resources within this sector. In part this has translated into hiring of more human resources for health and a reversal of the trends of the 1990s and mid 2000s and echoed in the perspective that the government is the 'best employer'. Kenya is an example of a country that is in the process of reversing the negative impacts of structural adjustment policies, a process that has required concerted effort and investment in the public sectors and in this case the health sector.

Despite improvements to working conditions for at least some of the health professionals, maldistribution persists. Rural populations continue to experience shortages in access to health

professionals. These shortages are particularly problematic, since they compromise service delivery. The life course perspective identifies particular population health needs in SSA, including the need for skilled birth attendants, and particularly for rural vulnerable populations (WHO 2014 pg. 33). Interventions that work to address neonatal mortality and reduce maternal mortality, such as improvement in access to skilled birth attendants are crucial (WHO 2014). The persistent shortages and maldistribution of health professionals ought therefore to continue to be a priority for Kenya, in efforts to reduce health inequities and improve health outcomes for its populations.

CONCLUSION

Kenya has made significant high-level progress in the improvement of the health system through development of strategic plans and policies. These changes have the potential to transform the context of HRH and service delivery. Creation of policies on paper does not necessarily translate into improvements in health system at the multiple levels including the macro, meso and micro levels and the impact of these changes are yet to be measured. Health professionals' dissatisfaction often stems from proximal meso and micro issues that eventually translate into 'push' factors including the working and living conditions and other more distal or macro factors such as the economy, political stability and the global migration context. These themes are explored in more depth in a second paper generated by this study. What this paper underscores is that these dissatisfactions should not be ignored as the supply paradox of an oversupply of health professionals who cannot be absorbed juxtaposed in a context of shortages may retrigger a wave of migration. Such conditions create a perfect storm for out migration which could have dire effects and undo the gains of the past few years.

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Chapter 3

Manuscript 2: Migration perspectives of health professionals in Kenya: push, pull, stick and stay factors

Brenda Dogbey, Ronald Labonté, Ivy Bourgeault and Raywat Deonandan

Abstract

Context: Health worker migration has gained increasing prominence due to the global shortage of over 7.2 million health workers. One of the challenges faced by countries in addressing shortages is the lack of clear data on migration of health professionals. While there is a plethora of anecdotal evidence, there is a dearth of empirical evidence on the scope and perspectives of health professionals with regards to migration. The specific objectives of this paper were to:

1. Discuss the factors that motivate health professionals to join their profession
2. Examine health professionals' perspectives of living and working conditions in terms of push, pull stick and stay factors
3. Understand the migration perspectives of doctors, nurses and Clinical Officers in Kenya

Methods: A mixed methods study was used including an online survey was conducted with health professionals (n=97) including doctors, nurses and Clinical Officers between August 2012 and February 2013, followed by in-depth interviews with doctors, nurses and Clinical Officers (n=18). The interview and survey data were analysed across health professional cadre by theme.

Findings: Overall there was a very high level of dissatisfaction with both living and working conditions. Among those who were likely to leave, 12% would do so in the next 6 months and 30% were likely to do so in the next 5 years. Nurses were most likely to leave while Clinical Officers and doctors who were specialists were less likely. Despite the high levels of dissatisfaction, few health professionals had taken concrete steps to pursue migration. Recruitment agencies were not found to play a significant role in migration, contrary to previous literature. Family ties played a key role in maintaining health professionals in Kenya as well as attracting back migrated doctors to Kenya.

Conclusion: An important theme that emerged from the research is that not everyone wants to migrate: among the group of health professionals surveyed or interviewed, there remains a strong sense of patriotism and commitment towards helping the population. This altruism among health professionals needs to be nurtured and harnessed by key stakeholders in the health system, particularly government, and steps need to be taken at multiple levels to ensure that health professionals do indeed have good living and working conditions in order to do their job and to provide for their families.

INTRODUCTION

Health worker migration has gained increasing prominence due to the global shortage of over 7.2 million health workers, a shortage that is projected to increase to 12.9 million by 2035 (Dal Poz et al., 2009; WHO/GHWA, 2013). The WHO recommends a health professional density of 23 per 10,000. In Kenya, the focus country of this study, the most recent estimate of this density is 13 per 10,000 (WHO/GHWA, 2013). Shortages persist in this context in part due to lack of sufficient trained personnel, internal maldistribution and international migration of health professionals (Dogbey et al., 2012; Tjadens et al., 2012).

Some of the key milestones towards addressing the global shortage include a series of high level forums on the health MDGs, the Human resources for health (HRH) strategy report of the Joint Learning Initiative (Joint Learning Initiative, 2004); the WHO publication *The World Health Report 2006: Working Together For Health* (WHO, 2006), the resolutions of the World Health Assemblies on Health workforce development (World Health Assembly, 57th Session, 2004; World Health Assembly, 58th Session, 2005; World Health Assembly, 59th Session, 2006) and the launch of the Global Health Workforce Alliance (GHWA) (Dal Poz et al., 2009). According to the WHO, this cluster of events helped alert national, regional and international policy-makers and stakeholders, including the media, civil society and the general public about the crucial role of HRH worldwide particularly the crisis in sub-Saharan Africa (Dal Poz et al., 2009). The adoption of the Kampala Declaration and Agenda for Global Action in 2008 and the 2010 WHO Global Code of Practice on the International Recruitment of Health Personnel has created a framework and a tool respectively for the potential management of migration and HRH both at source and destination country level (WHO, 2008a; WHO, 2010b). There have also been other fora on HRH hosted by the Global Health Workforce Alliance and the World Health Organization member states in 2011 and 2013, each of which issues statements on global HRH shortages and policy implications (WHO/GHWA, 2013). In line with the

broader recommendations from these organizations and fora, Kenya has stated commitments to move forward on the agreed-upon priorities with regards to managing HRH (MOH Kenya, 2015).

One of the challenges faced by countries in addressing shortages is the lack of clear data on the migration of health professionals. While there is a plethora of anecdotal evidence, there remains a dearth in knowledge of the scope and perspectives of health professionals with regards to migration, particularly in systematically gathered empirical evidence. The specific objectives of this research are to:

1. Discuss the factors that motivate health professionals to join their profession
2. Examine the health professionals' perspectives of living and working conditions in Kenya from a 'push, pull, stick and stay' perspective
3. Understand the migration perspectives of doctors, nurses and Clinical Officers in the context of Kenya

This paper is the second of three papers exploring the theme of migration of health professionals from Kenya placing emphasis on the views on migration of health professionals themselves, as well as their living and working context. The findings are analysed from a macro, meso and micro perspective to expose the multiple levels related to the migration considerations and decisions of health professionals.

CONCEPTUAL FRAMEWORK FOR ANALYSIS

Systems Thinking

Overall, a systems thinking approach was adopted for the analysis of the migration factors for health professionals. Systems thinking is an approach that emphasizes interconnectedness between the various actors in the health system (WHO, 2009). Human resources constitute one of six pillars of interconnectedness within the health system; the other factors include governance, financing, medicines and technologies, service delivery and information (WHO, 2009). Through this approach,

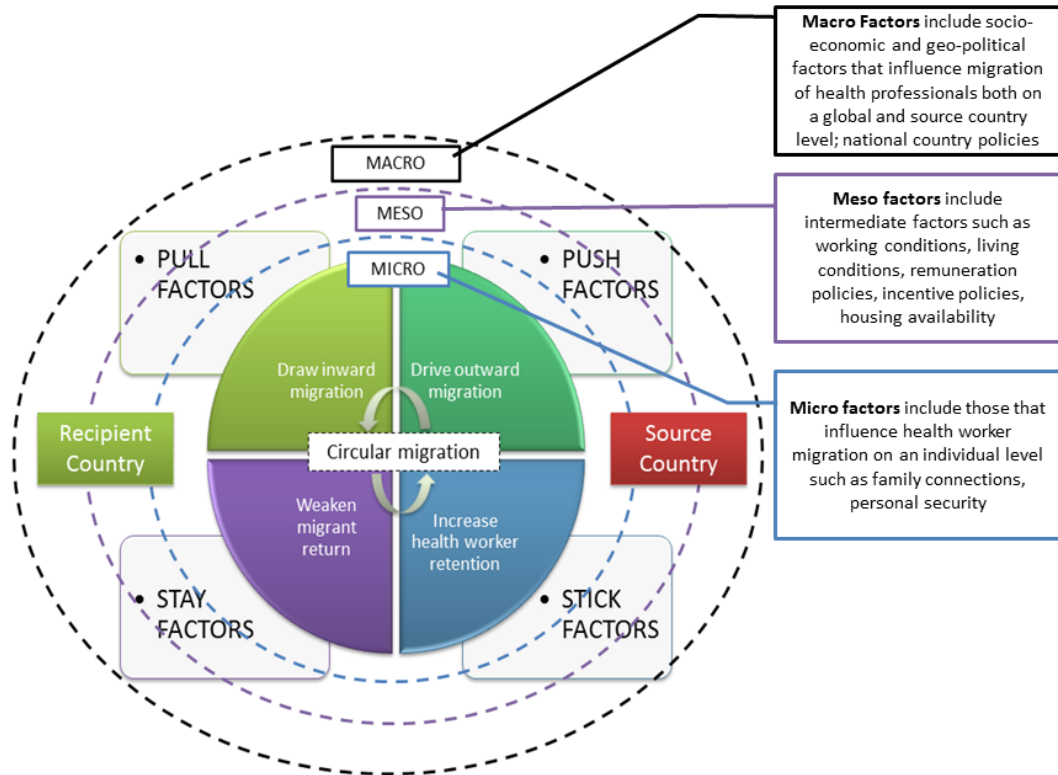
health professionals' perspectives are not viewed as just individual decisions but are examined within an overall context that involves other factors across multiple levels within the health system.

Push, Pull, Stick and Stay Analysis

To analyze the various factors associated with HRH migration, this paper draws upon a 'push', 'pull' 'stick' and 'stay' based on a conceptual framework developed by Pillay (2007). Pillay developed a conceptual framework at the core of which is migration from source to recipient country, and also describes the multiple forces that influence out-migration of African health professionals (2007). The framework has been expanded upon by the Research Network on Equity in Health in Southern Africa (EQUINET), who provide a thorough discussion of the push and pull factors and further explore 'stick' and 'stay' factors (EQUINET, 2007). More recently, in the Mobility of Health Professionals' Project (MOHProf), the push, pull stick and stay analysis was used to understand migration of health professionals to the European Union (Tjadens et al., 2012).

Building upon Pillay's model, MOHProf analysis, and EQUINET's synthesis of the factors, the research reported in this paper developed a conceptual framework (Figure 3.1) to analyze HRH migration with regards to migration both internally and internationally. Push factors from source countries refer to those factors that encourage outward migration. Pull factors are those factors that draw inward migration to higher income destination countries or urban areas. Stick factors are those that deter migration or encourage health professionals to remain in the source countries. Stay factors are those that discourage health professionals from leaving destination countries once they have migrated. The conceptual framework model includes an analysis of the factors at macro, meso and micro levels, as well as circular migration which encompasses return migration.

Figure 3.1: Conceptual framework on migration factors



These levels of analysis are not new and have been described in the literature (Dogbey, Samuilova, & Moellering, 2012; Hagen-Zanker, 2008), although they have not been explicitly included in analyses of push, pull, stick and stay factors. Integrating these levels of analysis allows a better understanding of the factors that influence health professional decisions to migrate to urban or international destinations and presents opportunities for intervening at an appropriate and/or multiple levels.

REVIEW OF THE LITERATURE ON PUSH, PULL, STICK AND STAY FACTORS

1. Push factors (from source countries)

Macro push factors

At a macro level, push factors include weak health systems, high disease burden, volatile and unstable political conditions, high levels of poverty, lack of economic security, high cost of living and high taxation levels (EQUINET, 2007; R. Labonte, Schrecker, Sanders, & Meeus, 2004; Pagett & Padarath, 2007; Pendleton & Crush, 2008; Pillay, 2007; UNDP, 2010). Lack of political accountability for the safety of citizens was a factor in migration from most African countries (Siegfried & Pienaar, 2008). Reduction in public spending on areas such as education, pension and falling service standards, alongside increasing taxation levels, were also found to be factors (Iiping et al., 2009). A weak economy is also a push factor for health workers. There is a paucity of analysis on the effect of macro-economic policies and trade agreements that sustain global migration particularly of health workers. Labonte and colleagues argue that such an analysis would require G8 and OECD member states to acknowledge the benefits they reap from migration and require remedial action on their part, such as some form of remuneration to developing countries to offset their investments in the production of health professionals; and ensuring that trade agreements disproportionately benefit developing countries, providing them with revenues to reduce domestic push factors (R. Labonte et al., 2004).

Meso push factors

At a meso level, poor working conditions, lack of medical infrastructure and frustration with responses to health worker issues are frequently cited as examples (Awases et al., 2004; Chikanda, 2006; Hagopian, Thompson, Fordyce, Johnson, & Hart, 2004; Hagopian et al., 2005; Matsiko & Kiwanuka, 2003; Mbindyo et al., 2009; Nguyen et al., 2008). In Kenya, health workers are often overworked due to staff shortages (Mbindyo et al., 2009). Unbearably high workloads are reported in the literature in a

two-fold manner: the high disease burden particularly from HIV/AIDS results in increased work due to increased number of patients and cases (Anyangwe & Mtonga, 2007; Roberts, 2008; WHO, 2007a); and there are shortages due to high mortality of health workers themselves, particularly from HIV/AIDS (Y. M. Dambisya, 2004; Driessche, Sabue, Dufour, Behets, & Van Rie, 2009; Gross et al., 2011; Lehmann, Van Damme, Barten, & Sanders, 2009). Lack of professional development is another factor that leads to exits, often due to a lack of resources for training and continued professional development (Bundred & Gibbs, 2007). Meso factors also relate to frustration with not being able to find schools for children and medical services for family.

Micro push factors

Most of the literature pertaining to push factors refers to the micro level and the most cited 'push' is poor remuneration (Hagopian et al., 2005; Hagopian, Zuyderduin, Kyobutungi, & Yumkella, 2009; R. N. Labonte et al., 2006; Ndetei et al., 2008; Nguyen et al., 2008; Oberoi & Lin, 2006; Ogembo, 2008; Pendleton & Crush, 2008; Rogerson & Crush, 2008). Within the context of poverty and a high cost of living, low remuneration becomes a significant factor and is often under-acknowledged by policy makers. Other push factors include lack of educational opportunities for children particularly in the rural areas (Kumar, 2007). Push factors at the micro level were found to be much stronger than pull factors from the destination countries; no matter how strong the pull factors, migration only appears to result if there are strong push factors from the source country.

2. Pull factors (in destination countries)

Macro pull factors

At a macro level, pull factors include stronger and more stable economies, lower levels of poverty and political stability in the destination countries (Buchan, 2005; Buchan, 2006; Buchan, Jobanputra, Gough, & Hutt, 2006; Kline, 2003; R. Labonte et al., 2006; McIntosh et al., 2007; Oberoi &

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Lin, 2006; Pendleton & Crush, 2008; Rogerson & Crush, 2008; Ross, Polsky, & Sochalski, 2005). The absence of systems to prevent active recruitment of health professionals by destination countries was also found to incentivize health worker migration (Adano, 2008; Buchan, 2005; Buchan, 2007; lipinge et al., 2009; Mills et al., 2008). In addressing the pull factors, an analysis is required of the historical context that has resulted in the wealth disparities that drive the pull from source to destination countries.

Meso pull factors

Pull factors at this level include better working conditions and perceived and actual career opportunities (Buchan, 2007; Hagopian et al., 2005; Pendleton & Crush, 2008; Rogerson & Crush, 2008; Schafheutle & Hassell, 2009; Troy, Wyness, & McAuliffe, 2007). Unmet needs and increasing demands for health services in high-income destination countries are also factors at both the macro and meso levels. At the meso level this manifests in aggressive recruitment by recipient countries and promises of improved life (Attaran, A., Walker, R. B., 2008; lipinge et al., 2009; Mills et al., 2008). Good housing is also a pull from rural to urban destinations (within source countries) and eventually, when coupled with better living conditions, becomes a pull towards international migration (Y. Dambisya, 2007; lipinge et al., 2009).

Micro pull factors

At a micro-level, the literature on pull factors are dominated by financial considerations, mainly higher remuneration rates in the destination countries (Chikanda, 2005; Davies, 2009; Gupta & Poz, 2009; lipinge et al., 2009; Muula & Maseko, 2006; Nguyen et al., 2008; Thomas, 2006). The opportunity to support family members who remain at home and the ability to remit funds is another factor (Connell, 2008; Connell et al., 2007; Wuliji, Carter, & Bates, 2009). Non-financial factors included high levels of morale among health workers, safer environment in both public and private sectors in richer industrialized countries, opportunities for further training and qualification, career development

opportunities, safety for children, and joining family who are already abroad (Awases et al., 2004; Y. Dambisya, 2007; Mathauer & Imoff, 2006; Ogembo, 2008; Wuliji et al., 2009).

3. Stick Factors (within source countries)

There has been a smaller body of literature that explicitly explores the stick factors, those that increase health worker retention, mainly conducted by EQUINET. At a micro level, stick factors operate as either as encouragers, factors that enhance retention, or as deterrents, factors that discourage migration. Encouragers include strong family, kinship, cultural and patriotic ties, high quality of life particularly in urban areas (EQUINET, 2007; Pagett & Padarath, 2007). Within the African context, family ties play a significant role in maintaining health professionals within the source country. Deterrents include fear of the unknown, expenses associated with relocation, complicated licensing processes in the destination country and a disinclination to learn a new language or adapt to a new culture or society (EQUINET, 2007). At a macro level, retention schemes and political changes that increase confidence in the source country are some of these stick factors. Some stick factors in the context of Kenya are discussed in the first phase of this research, including positive changes that have taken place in health policy and human resource management that have contributed to a reduction in migration of health professionals (Dogbey, Bourgeault, & Labonté, 2016a). The in-depth interviews reported later in this paper identify other “stick” factors.

4. Stay Factors (in destination countries)

Stay factors are those that weaken migrant return and include favourable working conditions at the destination country. For example, monthly salary differences for junior doctors comparing source country to South Africa (a favoured destination within Africa): \$50 in Sierra Leone, \$199 in Ghana, \$200 in Zambia, and \$1242 in South Africa (EQUINET, 2007). Physicians who migrate to South Africa are less inclined to return to their source country (EQUINET, 2007). Other micro level stay factors can be

conceived as encouragers versus deterrents. Encouragers to stay in the destination include development of social networks and friendships, ability to pursue further education and specialized careers in the health care system, while deterrents from going back to the source country include lack of incentives to return home, reluctance to disrupt family and children’s education, lack of opportunities upon return and fear of ridicule from family and friends if the migration did not produce the expected outcomes (Bourgeault, 2007; EQUINET, 2007; Oberoi & Lin, 2006). Stay factors in destination countries were beyond the scope of my doctoral research study, given its focus on destination country perspectives.

Table 3.1: Summary of the Push, Pull, Stick and Stay Factors from the literature

Push		Pull	
Macro	<ul style="list-style-type: none"> ▪ Weak health systems ▪ High disease burden ▪ High cost of living ▪ Macro-economic policies that do not favour life in the source country ▪ Political instability 	<ul style="list-style-type: none"> ▪ Stronger more stable economies ▪ Political stability ▪ Inadequate long-term planning for health workforce ▪ Aging population with high needs for health professionals 	
Meso	<ul style="list-style-type: none"> ▪ Poor working conditions ▪ Lack of medical infrastructure ▪ Shortages of health professionals leading to high workload and poor morale ▪ Lack of professional development opportunities 	<ul style="list-style-type: none"> ▪ Better career opportunities ▪ Unmet needs or demands for health professionals at hospital level ▪ Aggressive recruitment to meet/mitigate shortages on the short-term ▪ Improved housing and living conditions 	
Micro	<ul style="list-style-type: none"> ▪ Remuneration – low and inconsistent salaries ▪ Lack of educational opportunities for children 		
Stick		Stay	
Macro	<ul style="list-style-type: none"> ▪ Positive changes in the policy framework of source country e.g. Macro-economic policy, health policy etc. ▪ Political and socio-economic stability 		
Meso	<ul style="list-style-type: none"> ▪ Retention schemes ▪ Incentives for health workers such as housing allowances 		
Micro	<ul style="list-style-type: none"> ▪ Strong family and kinship ties ▪ Patriotism towards ones country ▪ Fear of the unknown ▪ Lack of opportunities and/or information on how to migrate 	<ul style="list-style-type: none"> ▪ Fear of returning to source country ▪ Lack of desire to disrupt children’s education ▪ Development of new social networks ▪ Lack of old social networks in the source country 	

The literature review presented a number of push, pull, stick and stay factors at the macro, meso and micro level. There are knowledge gaps on the push and stick factors from the source country perspective in this case Kenya. Further information is also required on the health professionals' perspectives on the living and working conditions in the context of Kenya and how this differs from the global literature available. This paper addresses these knowledge gaps.

METHODOLOGY AND DATA ANALYSIS

The methodology used in this study involved a sequential mixed methods study (Creswell, 2003) starting with a descriptive quantitative survey followed by in-depth qualitative interviews.

Quantitative methods

An online descriptive survey was conducted among health professionals (n=97) to measure their perspectives on migration and current living and working conditions in Kenya. The survey was administered to health professionals currently registered in the Kenya Medical Practitioners Pharmacists and Dentists Union⁷ (KMPDU) (n=4,549); nurses in the Kenyan Nurses Facebook Group⁸ (n=6,587); and Clinical Officers from the unregistered clinical officer union, Union of Kenyan Clinical Officers (UKCO) Facebook group⁹ (n=2,917). The breakdown of the respondents was doctors, pharmacists and dentists n=46; nurses (both enrolled and registered) n=22 and Clinical Officers n=29 with response rates of 1%, 0.69% and 1% respectively.

The online survey was chosen because it was cost-efficient and also provided for participation of health professionals from all over Kenya (Neuman, 2006). Given the sampling choice and the small sample size, quantitative results will not be claimed to represent the whole health workforce in Kenya.

⁷ There were 8092 medical doctors, 985 dentists and 2532 pharmacists registered in Kenya in 2012 with the official Medical Board (KNBS, 2013). The sample of participants was from the KMPDU union as I was unable to obtain contact information for the registered medical doctors, dentists and pharmacists.

⁸ There were a total of 63,301 nurses registered in Kenya in 2012 with the Nursing Council of Kenya including 35,148 registered nurses, 26,621 enrolled nurses and 1,532 BScN nurses (MOH, 2014)

⁹ There were 11,185 Clinical Officers registered in Kenya with the government in 2012 (MOH, 2014).

The survey instrument used was adapted from the Source Country Migration of Health Professionals (SCoP) study working group of which I was a member¹⁰. The survey covered questions about training, working conditions, living conditions, migration considerations and general demographic information. I developed the online version of the survey using the SnapSurvey web-platform (SnapSurvey 9) which was hosted by the University of Ottawa. Respondents did not require a user name or a password to access the survey. Consent was obtained by requiring respondents to either select “yes” or “no” as the first question of the survey. A “no” response automatically terminated the survey. Incomplete responses were allowed, so that those who did most but not all of the survey were still admissible as participants. In the analysis of the responses, each question was treated individually and as such the denominator varied depending on the question. Percentages therefore represent the total respondents of the given question.

Qualitative methods

In-depth in person interviews were conducted with 18 health professionals (4 doctors, 6 nurses and 8 Clinical Officers) who had completed the survey, and who self-identified as being available to be contacted for further information. Phone interviews were used for respondents who were outside of the capital were a cost-effective way to include a diversity of respondents from various parts of the country. All interviews were recorded and transcribed and consent was obtained in writing, or verbally in the case of the phone interviews prior to proceeding with the interview. The sample characteristics are provided in the findings.

Data Analysis

The quantitative data were analysed descriptively using SPSS 20 including frequencies, cross-tabulations and analysis of Likert scale questions. In the questionnaire, health professionals were asked to identify themselves by their cadre categories which included doctors, dentists, pharmacists, nurses

¹⁰ I received funding from the CIHR-funded SCoP project through grant number 106493

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(both enrolled and registered¹¹), or Clinical Officers. To facilitate analysis, doctors, dentists and pharmacists were grouped together. In Kenya medical doctors and dentists are licenced and governed by the same group – the Kenya Medical Practitioners and Dentists Board; pharmacists are licenced by the Pharmacy board. In terms of health professional representation, all three health professional groups are represented by the Kenya Medical professionals, Pharmacists and Dentists Union (KMPDU). Both enrolled and registered nurses were grouped together and Clinical Officers formed the third group.

For the qualitative data, a preliminary coding scheme was developed for both the interview data which were then analyzed manually both iteratively and deductively for common, predefined and emerging themes. A systems thinking perspective was used to situate the experiences of health professionals in the larger context of the health system (WHO, 2009). The findings are presented in the form of “push” and “stick” factors on a micro, meso and macro level from the conceptual framework and are presented in an integrated manner even though the data were collected sequentially (Creswell, 2003).

Limitations

The sample size for the online survey (n=99) is not representative of the population of doctors, nurses and clinical officers in Kenya and the findings provide insight to migration perspectives of health professionals but may not be generalizable to the majority of health professionals in the country. The survey was designed to be completed on a computer and was formatted as such; the reality that became apparent during data collection was that most respondents preferred to access the internet through their mobile phones and thus responding to a survey not formatted to this media proved to be a challenge for many respondents. Despite the best efforts to recruit respondents through email lists and Facebook groups, only a small number of respondents were obtained. Given the recruitment

¹¹ Enrolled nurses are those who have completed a certificate in two years, registered nurses complete a nursing diploma in 3 years while BScN are degree-holding nurses who will have typically completed a 4-year degree program.

methods, respondents of the survey are likely much younger (those who are part of the professional Facebook groups).

FINDINGS

1. Respondent characteristics

Online survey

Table 3.2 presents the key characteristics of the survey sample by profession. The mean age of the respondents was 31 years (32 years for doctors, dentists and pharmacists; 32 years for nurse; and 29 years for Clinical Officers). Among the actual population of health professionals in Kenya, 40% of enrolled nurses are aged 41 or older and 20% are older than 50 years (Kiambati, Kiiio & Toweett, 2013). This is a cadre that is currently being phased out given the short length of the program (2 years) and is being replaced by the registered nurse cadre (3 year diploma) and eventually the 4 year Bachelor of Science in Nursing degree. Over half of Kenyan doctors in the public sector are under 36 years old, while 58% of all health workers are above 41 years old. Retirement age for health professionals was changed from 55 to 60 in 2012 (Kiambati, Kiiio & Toweett, 2013). Within the health professions, 51% of the doctors, dentists and pharmacists were male 69% of the Clinical Officers were male and majority of the nurses (62%) were female. These proportions are broadly consistent with the gender representations of health professionals within the Kenyan workforce – overall 58% are female while 42% are male; 67% of the medical doctors are male; 72% and 78% of enrolled nurses and registered nurses are female while 64% of Clinical Officers are male (National Health Workforce Observatory Secretariat Kenya, 2010). The majority of the respondents were married or living together (59%), which was fairly consistent across all cadres. The respondents were employed in three main sectors: public n=59 (61%), private for profit n=18 (19%) and non-profit n=20 (20%). The public sector, as the largest employer, comprised of the 28 doctors, pharmacists and dentists (29%), 19 nurses (20%) and 12 Clinical Officers (12%).

Table 3.2: Respondent characteristics - Online survey sample

	Doctors, dentists and pharmacists % (n = 46)	Nurses % (n = 22)	Clinical Officers % (n = 29)	All % (n = 97)
Mean age (Std. Dev)	32 (4.97)	32 (5.63)	29 (3.23)	31 (4.85)
Gender				
Female	49% (22)	62%(13)	31% (9)	46%(44)
Male	51% (23)	38%(8)	69% (20)	54%(51)
Marital status				
Married/living together	57% (26)	64% (14)	59% (17)	59% (57)
Not married/ not living together	43% (20)	36% (8)	41% (12)	41% (40)
Employer				
Public sector	29%(28)	20%(19)	12% (12)	61% (59)
Private for profit	10% (10)	2% (2)	6%(6)	19% (18)
Non profit	8% (8)	1% (1)	11% (11)	20% (20)

In-depth interviews

Table 3.3 below summarises the characteristics of the health professionals who participated in the in-depth interviews.

Table 3.3: Respondent characteristics- In-depth interviews (n=18)

	Doctors (N=4) % (n)	Nurses (N=6) % (n)	Clinical Officers (N=8) % (n)	All (N=18) % (n)
Gender				
Female	50% (2)	50% (3)	25% (2)	39%(7)
Male	50% (2)	50% (3)	75% (6)	54%(11)
Employer				
Public sector	75% (3)	83% (5)	25% (2)	61% (59)
Private for profit	25% (1)	17% (1)	75% (6)	19% (18)
Non profit	-	-	-	-

2. Why did you go into your profession?

To understand the motivating factors behind their decision to go into the particular profession, the health professionals surveyed were asked why they went into their profession. The responses were classified into macro, meso and micro motivating factors. Table 3.4 presents a summary of the responses by level of motivating factors.

Table 3.4: Macro, meso and micro motivating factors behind decision to go into profession by cadre

	Doctors, dentists and pharmacists	Nurses	Clinical Officers	All
% of health professionals who responded “very important” for motivating factor for their profession				
Macro motivating factors				
International opportunities	25% (11)	70% (14)	35% (8)	38% (33)
Migration potential	9% (4)	62% (13)	17% (4)	24% (21)
Meso motivating factors				
Potential to get work	18% (8)	71% (15)	29% (7)	33% (30)
Social status	30% (13)	21% (4)	46% (10)	32% (27)
Influence of mentors	23% (10)	44% (8)	38% (9)	32% (27)
Influence of family	30% (13)	21% (4)	22% (5)	25% (22)
Influence of friends	7% (3)	16% (3)	5% (1)	8% (7)
Micro motivating factors				
Intellectual stimulation	84% (37)	95% (19)	68% (17)	81% (73)
To help others	78% (36)	86% (18)	71% (20)	78% (74)
Earning potential	56% (24)	55% (11)	56% (14)	56% (50)
Research opportunities	32% (14)	58% (11)	68% (17)	47% (42)
Teaching opportunities	18% (8)	56% (10)	38% (9)	31% (27)

Macro motivating factors

Macro motivating factors for health professionals included international opportunities and migration potential. From Table 3.4, 38% of the health professions (n=33) responded that international opportunities were “very important” as a motivating factor for going into their profession while 24% (n=21) responded affirmatively for migration potential. A chi square test of independence was performed to examine the relation between those who responded that migration potential was very important. The relation between these values was significant $\chi^2 (2, n=21) = 22.86, p < .01$.

Among those who responded that migration potential was “very important” a further analysis by health profession found that for the nursing profession, 62% responded that migration potential was very important (13 out of 21 nurses) while only 9% of doctors (4 out of 44) responded similarly. This is consistent with literature on nurse migration particularly in the context of Kenya as nurses are more likely to migrate than any other health profession. Only 17% (4 out of 24 of the Clinical Officers felt that migration potential was very important.

Meso motivating factors

“Meso” factors, i.e. those relating to the work environment and community, were only somewhat important for health professionals going into their chosen professions. Only 33% said the potential to get work was “very important” as a factor for choosing their profession, while social status was very important for 32% (n=27) of the health professionals (Table 3.4). Similarly, the influence of mentors, family and friends was only marginally important as a motivating factor for going into their profession. In contrast to the survey results, the interview data suggest that family and friends played a significant role in shaping health professionals’ career choices:

“For me it was not even a matter of choice...I always wanted to be a doctor from the time that I was very young. My dad made me think that I could be the best thing in the whole world and so for me excelling in the sciences made me know that I could be anything so when it came to choice I was just drawn to medicine” – HPD 1, Public Sector Female Doctor

“Basically you know how it is here...if you’re in the sciences you have a few choices, if you’re in the arts you have a few choices. So I had wanted initially to do pharmacy but someone advised me that that is probably not the best thing. So I that’s why I decided to go into medicine – HPD 2, Public Sector Female Doctor

Medicine also emerged as the career of choice even for those who did not end up becoming doctors; the financial aspect was not the motivating factor but health professionals persevered despite the conditions:

“If I was given the option I would have preferred to be a doctor...(laughs)...but I still love what I do. It is not so much of a rewarding job financially, but it gives you great satisfaction to know that you have helped someone” – HPCO 1, Private Sector Female Clinical Officer

“Is this job satisfying? Not financially...but ok you feel good, you feel satisfied when you see a baby delivered and when someone was sick and you are told they are doing better, you feel good” – HPN 1, Private Sector Female Nurse

Micro motivating factors

The top motivating “micro” factor for why health professionals went into their profession was intellectual stimulation, followed by helping others and third was earning potential (Table 3.4). Most of

the respondents (81%) said intellectual stimulation was “very important”. Fifty-six percent of the health professionals cited earning potential as “very important”, relatively low in the context of the high profile that earning potential and remuneration are often given in literature on retention of health professionals (Dogbey 2012; Adamo, 2008). Altruism on the other hand, is often downplayed as a factor motivating health professionals to go into their profession, yet a large majority (78%) of all respondents found that helping others was a “very important” factor for going into their profession. When further analysed by health profession, 86% of the nurses responded that helping others was “very important” while 71% of Clinical Officers and 78% of doctors, dentists and pharmacists responded that helping others was “very important” (Table 3.4). This finding was reinforced in the in-depth interviews. Two female Clinical Officers, both working in a private institution, found helping others very satisfying:

“...they can get help from me...they come back 2 to 3 weeks later and they tell you ‘Daktari’ (doctor) I’m feeling better...that is what keeps me going every other day. The thought and knowledge that I helped someone...it is really satisfying” – HPCO 1, Private sector female clinical officer

“I’ve always wanted to help people, especially children and especially in rural areas, that’s the areas where I grew up, their health care was not really accessible and where I could see children suffering and I had always wanted to learn how I can help children, that’s why I chose this medical career” – HPCO 5, Private Sector Female Clinical Officer

Policy makers need to acknowledge the goodwill and intentions of health professionals and find ways to maintain and support them so as to retain them particularly in underserved areas.

3. Perception of government efforts (macro factors)

Overall government efforts to improve macro factors in Kenya

The socio-political and socio-economic context of a country is often a factor that contributes towards migration of health professionals. With respect to the macro conditions determined or influenced by government policy, a large percentage of health professionals were dissatisfied with the levels of taxation (80%), cost of living in Kenya (78%) and the quality and upkeep of infrastructure (75%):

“I’m so frustrated because I am not practicing what I was taught to practice... so for me just the infrastructure bit that’s frustrating” HPD 2, Public Sector Female Doctor

Poor infrastructure is experienced mostly as a meso level factor, but respondents clearly saw that it resulted from policy decisions made by government at a macro level.

Table 3.5: Satisfaction level on government efforts to address macro factors by health profession

Variable	Doctors, dentists and pharmacists	Nurses	Clinical Officers	All
% of health professionals who responded “very dissatisfied/dissatisfied” to government efforts				
Macro conditions overall				
A fair level of taxation	76% (35)	86% (19)	82% (23)	80% (78)
Cost of living in Kenya	78% (35)	81% (17)	76% (22)	78% (75)
Public infrastructure	80% (37)	77% (17)	62% (18)	75% (73)
Macro government efforts				
Expenditure and management of health	93% (40)	82% (18)	86% (24)	88% (83)
Efforts to mitigate ethnic inequality	91% (40)	71% (15)	66% (19)	79% (75)
Efforts to mitigate violence	84% (37)	59% (13)	66% (19)	73% (70)
Expenditure and mgmt. of social welfare	71% (31)	68% (13)	52% (15)	65% (60)
Expenditure and mgmt. of education	66% (29)	68% (15)	55% (16)	64% (61)
Expenditure and mgmt. of environment	71% (31)	57% (12)	52% (15)	62% (59)
Expenditure and mgmt. of economy	64% (28)	59% (13)	52% (15)	59% (57)
Efforts to mitigate gender inequality	41% (18)	73% (16)	24% (7)	43% (41)

Eighty percent of health professionals were dissatisfied/very dissatisfied with the government expenditure and management of health (Table 3.5). Other factors of dissatisfaction included efforts to mitigate inequality and violence, and levels of expenditure on social welfare services and education. While the general population will likely share similar levels of dissatisfaction with the overall socio-political and economic context, it is particularly significant for health professionals, since they are the cadres who are most able to consider migrating to other countries.

4. Perceptions of working and living conditions (meso and micro factors)

Table 3.6 below summarises respondents' perceptions of working and living conditions at meso and micro levels, as these are known to influence intent to migrate from the literature review.

Table 3.6: Meso and micro working level of satisfaction with working conditions by health profession

Variable	Doctors, dentists and pharmacists	Nurses	Clinical Officers	All
% of health professionals who responded "very dissatisfied/dissatisfied" to working conditions				
Meso working conditions				
Infrastructure facilities at work	70% (32)	91% (19)	62% (18)	72% (70)
Work benefits	69% (31)	86% (18)	66% (19)	72% (69)
Occupational safety	58% (25)	81% (17)	71% (20)	68% (63)
Availability of medical supplies	61% (27)	82% (18)	58% (15)	66% (61)
Respect from government	54% (25)	73% (16)	48% (13)	57% (55)
Respect from management	37% (17)	41% (9)	50% (13)	42% (40)
Respect from colleagues	22% (10)	19% (4)	36% (10)	25% (24)
How women are treated	23% (10)	32% (7)	21% (6)	24% (23)
How certain ethnic groups are treated	30% (14)	23% (5)	25% (7)	28% (27)
Micro working conditions				
Your current income vs ideal income	91% (42)	91% (19)	90% (26)	91% (88)
Your current income vs gd. quality of life	80% (37)	96% (21)	97% (28)	89% (87)
Your income vs. other professionals	70% (32)	91% (20)	86% (25)	80% (78)
Opportunities to travel	73% (32)	82% (18)	76% (22)	76% (73)
Opportunities for education	54% (25)	82% (18)	71% (20)	66% (64)
Your workload	44% (20)	91% (20)	69% (20)	62% (61)
Personal security	42% (19)	80% (16)	48% (13)	52% (48)
Job security	29% (13)	57% (12)	45% (13)	40% (38)

Working Conditions – meso factors

Interviews highlighted the fact that a lack of benefits at work and a lack of consistency in terms of contracts was a discouraging factor to stay in Kenya:

"You work on a contract for 3 years, then it ends so you don't get all the benefits which other civil servants will be getting, even if you will be entitled, you only get some of those allowances. Some of us contract nurses are working in rural facilities and maybe some of us are in hardship areas but you don't get any of those allowances, you can't access any bank loans...it's very frustrating" – HPN 2, Public Sector Male Nurse

"I think the infrastructure is the first thing that causes people to leave besides the limited spaces for post graduate training" – HPD 2, Public Sector Female Doctor

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This was congruent with the findings from the survey whereby infrastructure and facilities at work constituted the largest source of dissatisfaction (72%) among the health professionals followed by work benefits for health professionals. A lack of supplies was also identified as a source of dissatisfaction.

Working conditions – micro factors

At the micro level satisfaction with the working conditions was very low and conversely dissatisfaction was high. The top 3 areas of dissatisfaction were all income-related: health professionals' income compared to what they would like to earn, income compared to a good quality of life, and income compared to other (non-health) professionals.

Job security is often cited as a push factor for migration and while the satisfaction level for this was relatively low amongst our respondents, the level of dissatisfaction was not as high as would be expected in the context of Kenya (Iipingi et al., 2009; Mwaniki & Dulo, 2008; Ndetei et al., 2008). This could be accounted for by the fact that 61% of health professionals work in the public sector where job security is relatively high. This was also referenced in the in-depth interviews:

“...you prefer to continue working [for the government] because in the government there is that security...you know that after some years you are promoted, the salary will increase and all that. So [people] prefer to remain in the government. Those who are working in private, even if it's a small private hospital, they usually look for opportunities to work in the government...they are not satisfied because their job is not that secure” – HPN 1, Public Sector Male Nurse

From the in-depth interviews, and consistent with the literature on why health workers from developing countries seek to migrate, pull factors included the perception of a better quality of life, in terms of better pay, opportunities to develop career-wise and education:

“The major reason [I would consider migrating] is the quality of life...the salary and the living are better there, the pay package is better...and also opportunities to develop, to go to a higher level of education” – HPN 3, Public Sector Male Nurse

For the context of Kenya this finding therefore validates the current knowledge on the pull factors at a meso level (Mwaniki and Dulo, 2008; Ndetei et al., 2008).

Living Conditions – meso and micro factors

At the meso level health professionals were very dissatisfied and/or dissatisfied with how certain ethnic groups were treated (58%), family safety (54%) and the ability to find good schools for their children (49%) as shown in the Table 3.7.

Table 3.7: Meso and micro satisfaction level with living conditions by health profession

Variable	Doctors, dentists and pharmacists	Nurses	Clinical Officers	All
% of health professionals who responded “very dissatisfied/dissatisfied” with living conditions				
Meso living conditions				
How certain ethnic groups are treated	67% (31)	62% (13)	38% (11)	58% (56)
Family safety	54% (25)	59% (13)	46% (13)	54% (52)
Ability to find good schools for children	48% (22)	55% (12)	45% (13)	49% (48)
How women are treated in general	42% (19)	59% (13)	30% (8)	43% (41)
Micro living conditions				
Ability to find housing you want	72% (33)	73% (16)	83% (24)	75% (74)
Cost of education for your children	74% (34)	68% (15)	54% (15)	67% (65)
Access to medical services (family)	59% (27)	77% (17)	55% (16)	62% (61)
Future of your children in Kenya	53% (24)	77% (17)	54% (15)	59% (57)
Personal safety	56% (25)	76% (16)	52% (15)	58% (56)
Ability to find quality affordable prod.	52% (24)	64% (14)	61% (17)	54% (52)
Ability to find a job in your profession	31% (14)	64% (14)	72% (21)	49% (48)
Quality of education for your children	50% (23)	52% (11)	35% (10)	43% (41)

Although the respondents had previously noted a positive measure for the way women were treated in the work place, only 21% were satisfied/very satisfied with the way women were treated in general. Of the female respondents to the question of how women are treated in general, 57% were very dissatisfied/dissatisfied, 31% were neutral and 12% were very satisfied/satisfied. Furthermore, of those who responded that they were very satisfied/satisfied with how women were treated in general, 74% were male and only 26% female.

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While levels of dissatisfaction with living conditions were not as high as with working conditions, health professionals overall were dissatisfied. The top three areas of dissatisfaction were ability to find housing you want, cost of education for your children, and access to medical services for your family and/or children. Fifty-nine percent of health professionals were dissatisfied with the level of personal safety while 52% were dissatisfied with the ability to find a job in their profession.

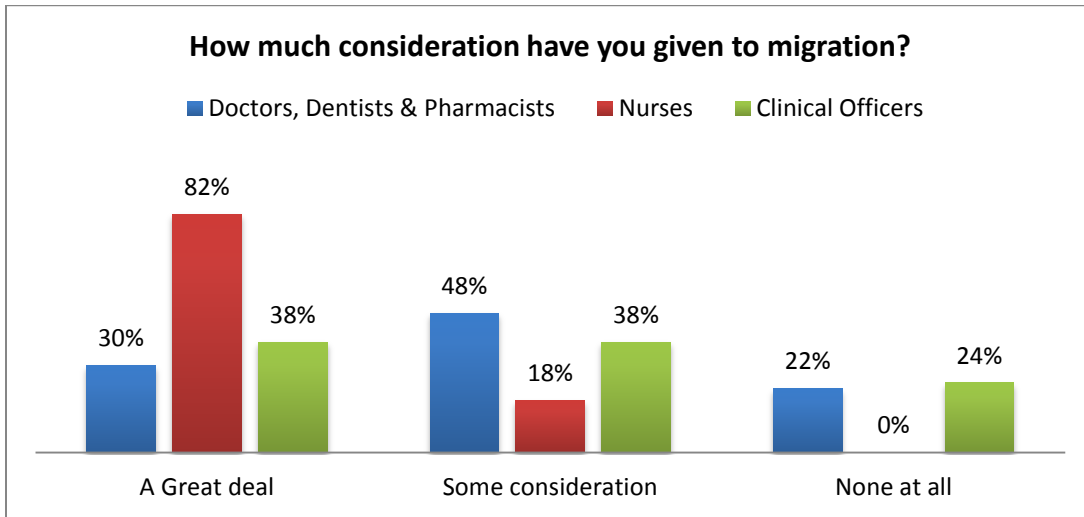
The interviewed health professionals concurred with this dissatisfaction pointing to the challenges faced for their families:

“A lot of people don’t want to work in rural areas because of the quality of life in rural areas. You can’t get tap water, there is no electricity, you are far from amenities...you’re not even sure if there will be schools for your children.” – HPN 3, Public Sector Male Nurse

5. Migration considerations

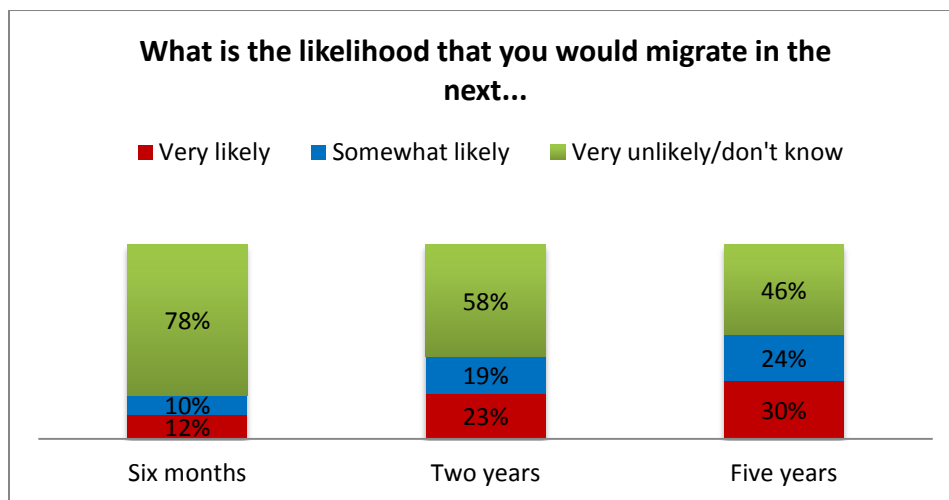
In the previous section, we found overall low levels of satisfaction with working and living conditions among health professionals. These levels of dissatisfaction do not necessarily translate into migration considerations among health professionals in Kenya. The survey asked health professionals about their considerations for moving to another country. Forty four percent had given migration ‘a great deal’ of consideration while 18% had given it no consideration at all. Worthy of note is that all nurses had given migration consideration with 82% having given migration ‘a great deal’ of consideration compared to just 30% of doctors, dentists and pharmacists and 38% of Clinical Officers (Figure 3.2).

Figure 3.2: Migration consideration by health professional cadre



Further questions explored how soon health professionals anticipated migrating. Seventy-eight percent were very unlikely or didn't know if they would move in the next six months. Of those who were very likely to migrate, 30% would do so in the next five years, 23% in the next two years and only 12% in the next 6 months (Figure 3.3).

Figure 3.3: Likelihood to migrate in the next six months, two years and five years

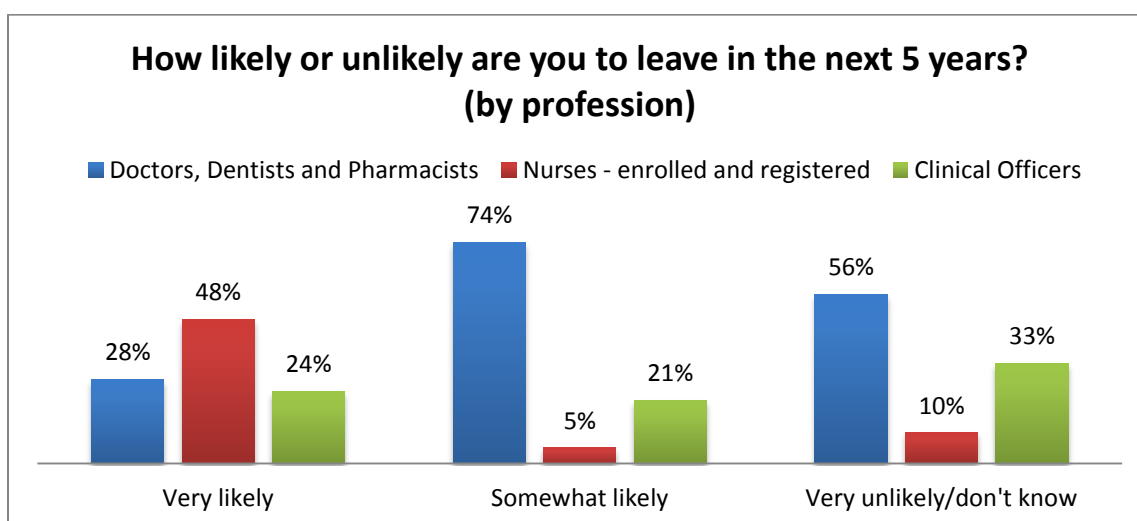


A male nurse interviewee on the other hand noted that his migration would not be permanent and would be for a specified period of time reflecting how HRH in other SSA countries also refer to their migration intentions (Labonté et al., 2015) :

“Ok personally I would [migrate] for about 10 years and then come back” – HPN 3, Public Sector Male Nurse

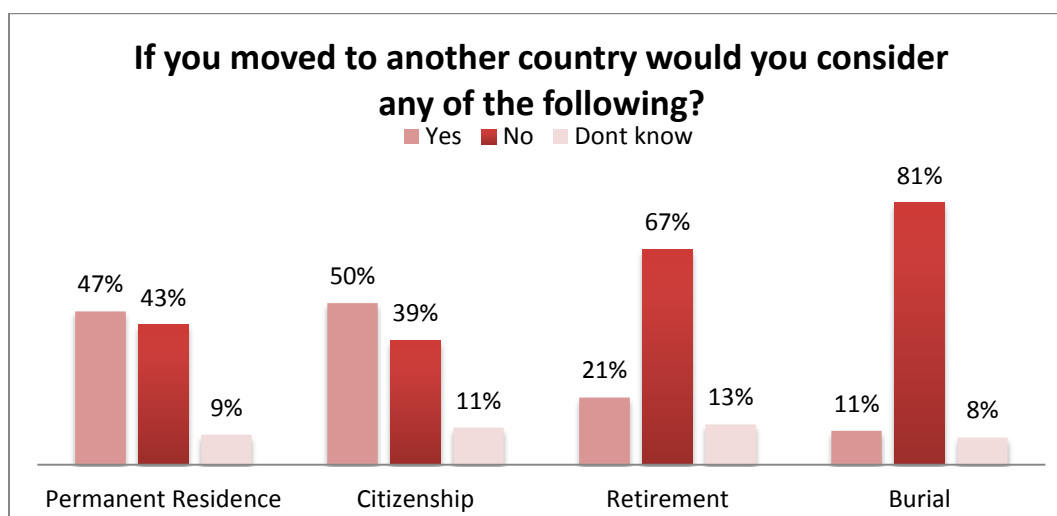
Migration was therefore viewed as a longer term plan rather than an immediate action to be embarked upon and as a part of an even longer-term life/work plan with respect to return migration.

Figure 3.4: Likelihood of migrating in the next 5 years by profession



Of the 30% who are very likely to leave in the next 5 years (n=25), almost half are nurses (n=12) and the rest are doctors, dentists and pharmacists (n=7) and Clinical Officers (n=6) as shown in Figure 3.4. Moreover, when health professionals were asked whether they would consider taking on permanent residence or citizenship in the destination country, 47% and 43% said yes, respectively; when asked whether they would be considered retiring or being buried in the destination country, 67% and 81% said no, respectively (Figure 3.5).

Figure 3.5: Migration considerations – permanent residence, citizenship, retirement and burial



The top migration destination identified was the USA (32%) followed by Canada (14%) Britain (14%), other African countries (14%), Australia (10%) and other European countries (10%). Data from the Nursing Council of Kenya on actual requests for verification of documents for nurses intending to migrate identified the USA as the top destination country (61%), followed by Canada (14%), Australia (12%), New Zealand (2%) and Ireland (2%). Nursing Council data also show an overall downward trend in requests for verification for migration of nurses from Kenya since 2003. Data were unavailable for other health professional cadres. This was validated in the health professional interviews as the UK was the top destination country mentioned followed by the USA.

Recruitment agencies were not found to play a significant role in the migration considerations of health professionals; 37% of the respondents (n=35) found that they played no role at all while 19% (n=19) found that they played a slightly significant role in influencing their decision to emigrate. This is a key departure from literature on migration which often cites the role of recruitment agencies as significant in migration discourse (Attaran, A., Walker, R. B., 2008; Buchan, 2010).

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An emerging theme was the fact that considering migration is quite different from taking concrete steps towards migration. Only 9% of the respondents had applied for a work permit while 16% had applied for registration as a health professional in a destination country; 13% had applied for permanent residence and only 9% had applied for citizenship (Table 3.8).

Table 3.8: Steps taken to apply for work permit, permanent residence, citizenship, or professional registration by health profession

Variable	Doctors, dentists and pharmacists	Nurses	Clinical Officers	All
% of health professionals who responded "yes" to steps taken towards migration				
Applied for				
Work permit	0% (0)	23% (5)	12% (3)	9% (8)
Permanent residence	9% (4)	18% (4)	15% (4)	13% (12)
Citizenship	0% (0)	14% (3)	19% (5)	9% (8)
Professional registration	13% (6)	23% (5)	15% (4)	16% (15)

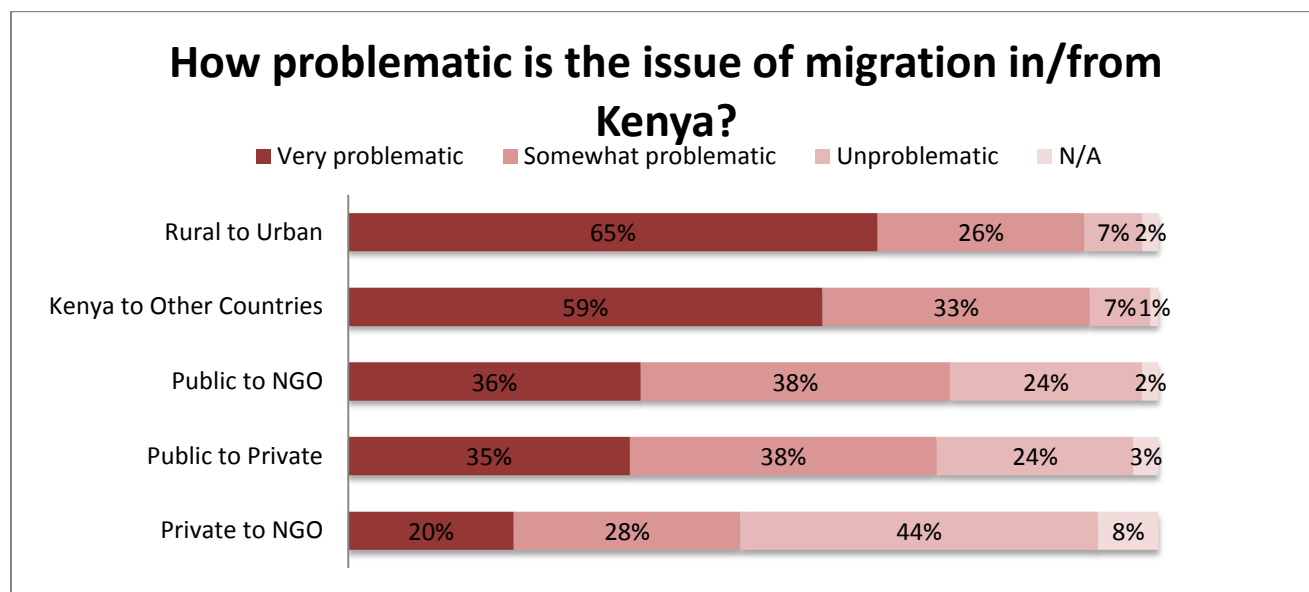
Furthermore, most health professionals were unwilling to sell their property or house in Kenya, to give up their Kenyan citizenship or to remove their investments from Kenya (Table 3.9).

Table 3.9: Willingness to sell house, property or remove investments from Kenya by health profession

Variable	Doctors, dentists and pharmacists	Nurses	Clinical Officers	All
% of health professionals who responded "unwilling" to sell property or give up citizenship				
How willing/unwilling are you to				
Give up citizenship from Kenya	85% (39)	73% (16)	79% (22)	79% (77)
Remove all your investments from Kenya	80% (37)	77% (17)	75% (21)	77% (75)
Remove all your savings from Kenya	72% (33)	77% (17)	82% (22)	75% (72)
Sell property in Kenya	71% (32)	64% (14)	75% (21)	70% (67)
Sell house in Kenya	63% (29)	55% (12)	64% (18)	61% (59)

When asked to assess how problematic they thought the issue of migration was for Kenya, 65% of the health professionals felt that rural to urban migration was very problematic while 59% felt that international migration was very problematic (Figure 3.6).

Figure 3.6: Perceptions of how problematic migration is in/from Kenya



While most literature on internal migration has discussed the private sector drawing in health professionals from the public sector, only 35% of the health professionals found public to private migration to be very problematic. This was nuanced in the in-depth interviews:

“I think the tendency to run to private has changed because you’re thinking ...why should I move and get just 10,000 KSh. (\$125 CAD) more? You want to see that I can get a [monthly] net of 200,000 KSh. (\$2,500 CAD) and then I move, I need to get a guarantee so you’re thinking of the benefits first before you jump ship” – HPD 2, Public Sector Female Doctor

“People are leaving private to work in government for many reasons: the working hours, at least you can get a loan [from the banks] if you are working for the government...and also the time, the working hours...you work less hours with the government” – HPN 1, Private Sector Female Nurse

Another key theme that arose from the in-depth interviews was the preference of health professionals to remain in Kenya rather than migrate; this constitutes a key stick factor for Kenya:

“Having a family, [migration] would not work out for me...we are not struggling, we are enjoying life. I have a husband who works a lot and I would like to actually stay in government because I know there is a lot of need...they don’t have enough doctors in government, everyone is always leaving for greener pastures” – HPD 2, Public Sector Female Doctor

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“I have thought about [migrating] but I have never really done it...[destination countries] don’t need doctors like me there, I think I am needed more here” – HPD 4, Public Sector Male Doctor

There was also mention of the barriers to migration, particularly for Clinical Officers who typically cannot migrate apart from within the region of East Africa:

“I have looked for the process of migration, I’ve been applying for jobs, I just need a valid passport and the documents in Kenya, all those I have but I’ve been applying for jobs, but there has not been success” – HPCO 5, Private Sector Female Clinical Officer

“I have not really [considered migrating]. I am comfortable at home [in Kenya]. Most probably my husband would be the most uncomfortable person having to migrate...plus it would be absolutely tricky because if anything Clinical Officers are...only recognized in East-Africa and probably Botswana...so if I have to relocate it has to be the East Africa states otherwise I am jobless and I don’t have any papers” – HPCO 1, Private Sector Female Clinical Officer

Overall, stick factors emerged as significant; health professionals were also quite dissatisfied with the health system but they did not engage in steps towards migration. This is further discussed next.

DISCUSSION

On a larger macro level, health professionals were dissatisfied with the general cost of living in Kenya as well as with government efforts to address such issues as inadequate expenditures on health and education, and the general poor management of infrastructure and security. These were fairly consistent with the literature on health professionals particularly in sub-Saharan Africa (Dogbey et al., 2012; EQUINET, 2007; Ogembo, 2008; Tjadens et al., 2012). This level of dissatisfaction reported is despite the overall increase in the growth rate of the Kenyan economy and public health care spending (Dogbey, Labonté & Bourgeault, 2016). From a systems thinking perspective, health systems are non-linear and therefore likely complex in their responsiveness to investments. Since increased government investment into the public health system only began in 2012 it would be interesting to conduct the same

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research in 2017 to explore the attitudes of health professionals on the macro health system following 5 years of higher levels of government public health spending.

At a meso level, there were high levels of dissatisfaction with both living and working conditions. Lack of infrastructure, work benefits and occupational safety were the main sources of dissatisfaction with working conditions. These were also consistent with the literature (Chandler, Chonya, Mtei, Reyburn, & Whitty, 2009; Delobelle P et al., 2011; Henderson & Tulloch, 2008; McAuliffe et al., 2009). On the other hand, job security was found to be high in the public sector compared to the private sector, contrary to what most literature cites around work in the public sector. The improvements that have taken place in government health policy and planning since 2003 appear to be trickling down and being felt by health professionals (Dogbey et al., 2016a). Nonetheless,, health policy makers need to be cautious of the levels of dissatisfaction within the country. While these may not translate into immediate migration considerations, sustained frustration with the issues like personal safety, family safety, and the socio-economic situation combined with frustrating working conditions have in the past led to and could certainly once again lead to large numbers of health professionals migrating out of Kenya. The government and other stakeholders need to work together to address the areas of dissatisfaction of health professionals with regards to working conditions both in the public and in the private sector.

At a micro level, there were high levels of dissatisfaction with living conditions, inability to purchase affordable goods or access quality affordable education for their children. Other areas of dissatisfaction included personal safety, a point particularly raised by nurses (76%) and inability to access medical services for family members. These factors are consistent with literature on dissatisfaction. Place and health is important for health professionals themselves; the lack of health professionals affects access to health services for the general population, yet health professionals refuse

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to live in rural areas because of factors that influence their own social determinants of health – income, housing, education, access to health services for their families, amongst others. Health professionals themselves are seeking areas where they can have the best conditions for raising their families, even as they are called upon to provide services to the population.

Recruitment agencies were not found to play a significant role in migration of health professional but personal networks probably played a stronger role unlike the literature which provides much more prominence to the role of recruitment agencies (Attaran, A., Walker, R. B., 2008; Buchan et al., 2009; Mills et al., 2008; Snyder, 2009). This could be attributed to fact that there have been interventions such as the Commonwealth Code and the WHO Global Code of Practice on the International Recruitment of Health Personnel (Buchan, 2010; Dumont et al., 2008; Rogerson & Crush, 2008). Although these interventions are voluntary, they may have had an impact on reducing or deterring recruitment agencies from playing an active role in Kenya. A similar decline of active recruitment through advertisements in professional journals and other media was found in South Africa and linked to the global policies and frameworks to manage international migration of health professionals (Dambisya, Y.M. & Mamabolo, M.H., 2012).

Health professionals were found to be motivated primarily by a desire to help others, intellectual stimulation from their profession and, to a lesser extent, earning potential. From the in-depth interviews, most health professionals spoke of the satisfaction that they gained from helping others and making a difference in the lives of their patients. This is in contrast to the literature that underlines remuneration as the key motivational factor for health professionals (Iipinge et al., 2009; Mwaniki & Dulo, 2008; Ndeti et al., 2008). Health professionals did note that the income was a source of dissatisfaction particularly with regards to what they would like to earn and what other health professionals were earning, consistent with the above literature.

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Stick factors also emerged from the survey and in-depth interviews both in terms of encouragers and deterrents. This is new information for the context of Kenya and fills the knowledge gap in this area. Health professionals were unwilling to sell their property from Kenya in order to migrate and neither were they willing to be buried nor retire in destination countries. Literature often discusses high levels of intent to migrate, however from the interviews, health professionals were not willing to follow through on concrete steps towards migration.

Strong family and kinship ties also kept health professionals in Kenya as did the challenges of finding jobs for spouses upon migration. A key finding of this research is that dissatisfaction with current conditions, does not necessarily translate into migration of health professionals. Many of the health professionals surveyed and interviewed had considered migration but had not yet taken concrete steps towards migrating out of Kenya. Few had applied for work permits, registration in their health profession abroad, permanent residence or even citizenship and few were willing to sell their property and take their investments out of Kenya. Dissatisfaction did not therefore automatically mean migration for the health professionals, although the option remained at the back of most of minds of health professionals as found in the in-depth interviews. These stick factors have previously not been captured in the literature as there has been a much larger focus on push factors at the source country level. Emerging from the interviewees is the fact that most would prefer to live and work in Kenya where they are 'comfortable' rather than migrate to destination countries. Given better living and working conditions, the likelihood of migration would be further reduced. About half of the health professionals would consider applying for permanent residence or citizenship in the destination country but very few would consider retirement or even being buried there. Migration appears to be considered as a long-term plan – more health professionals envisaged migrating in 5 years' time compared to 6 months or even 2 years' time. This is consistent with findings from South Africa where migration was considered to be a longer-term plan rather than something to be undertaken immediately (Labonte et al., 2015).

CONCLUSION

This study explored Kenyan skilled health workers' perceptions of living and working conditions and their migration considerations. It provides an insight as to some of the preoccupations of health professionals as well as the contrast between their satisfaction levels versus the concrete steps that have been embarked upon migration from Kenya. An important theme that emerged from the research is that not everyone wants to migrate: among the group of health professionals surveyed or interviewed, there remains a strong sense of patriotism and commitment towards helping the population. This altruism among health professionals needs to be nurtured and harnessed by key stakeholders in the health system, particularly government, and steps need to be taken at multiple levels to ensure that health professionals do indeed have good living and working conditions in order to do their job and to provide for their families. Health professionals are the future of health system investments in the country, and both the government and private sector need to work in tandem to support them for the sake of improving overall population health outcomes across Kenya particularly for the most vulnerable.

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Chapter 4

Manuscript 3: Promising solutions to Human Resources for Health shortages and maldistribution in Kenya: exploring the scale-up of Clinical Officers

Brenda Dogbey, Ivy Bourgeault, Ronald Labonté

Abstract

Mid-level cadres have long had an integral role in context of health systems globally. Clinical Officers have played a key role in the Kenyan health system since the early 1900s. Today, over 70% of the population is rural, and yet 70% of the medical doctors are located in urban areas; there is a need for a health cadre that would be able to serve the needs of the rural population. We explore the potential of scaling-up the cadre of Clinical Officers in order to address current shortages and maldistribution of health professionals in Kenya including identification of the barriers and facilitators. Specific objectives are to answer the following questions:

1. What are the attitudes of key stakeholders and health professionals regarding the utilization of Clinical Officers in the context of Kenya?
2. What are the barriers and facilitators to the scaling-up Clinical Officers?

A single case-study approach was used that entailed a scoping review of the literature followed by in-depth interviews with 20 key health system stakeholders and 18 health professionals between August 2012 and February 2013 in Kenya, which were analyzed manual using thematic coding. Emerging themes were identified and a SWOT analysis was then used to understand the strengths, weaknesses, opportunities and threats to scaling-up Clinical Officers.

There were limitations as to how to operationalize the scale-up of clinical officers. Most government policy makers were physicians who found that Clinical Officers could not replace a physician within the health setting. On the other hand, Clinical Officers themselves felt that they could and should be scaled up as a cadre and if necessary be provided with the training required to scale them up.

INTRODUCTION

Mid-level health workers have long had an integral role in health systems globally. In sub-Saharan Africa, including Kenya, the focal country of this study, they continue to play an important role in supporting primary health care service delivery, particularly for rural-based populations. Clinical Officers are middle level health personnel who offer a wide range of medical services – curative, preventive, promotive and rehabilitative -- in all parts of Kenya and in other sub-Saharan African countries (KMTC, 2010). Clinical Officers specifically have been a part of the Kenyan health system since the early 1900s (KMTC, 2010). They supplement the work of medical doctors at all levels of healthcare, from health centers where they are in charge to district and provincial hospitals to referral teaching hospitals (KMTC, 2010). Although their presence is not recent, they continue to be an under-utilized and under-explored cadre given the shortages and maldistribution of skilled health workers within the country (Mbindyo P et al., 2013).

In this paper we present the findings of the third phase of research on source country perspectives on the migration of health professionals from Kenya. The first phase entailed a detailed contextual analysis of human resources for health (HRH) in Kenya with a particular emphasis on policy developments pertinent to, and key informant perspectives on, HRH migration. The second phase involved an online survey with health professionals followed by in-depth interviews to explore their perspectives and intentions on migration. In both phases, geographic maldistribution was a key challenge for service delivery particularly to rural populations and Clinical Officers were discussed as a key resource to address this challenge, in particular because doctors and nurses were more likely than Clinical Officers to consider migration. In this third and final phase of the research we explored the scaling up of Clinical Officers as a potential solution to both maldistribution and out-migration of HRH, posing two specific research questions:

1. What are the attitudes of key stakeholders and health professionals to the utilization of Clinical Officers in the context of Kenya?
2. What are the barriers and facilitators in scaling-up the clinical officer role?

THEORETICAL APPROACH AND CONCEPTUAL FRAMEWORK

This study incorporates a systems thinking approach which emphasizes the importance of context in examining connections between health system parts, actors and processes (WHO, 2009). Some of the key characteristics of systems is that they are self-organizing, constantly changing, tightly linked, governed by feedback, non-linear, resistant to change and often act in counter-intuitive ways (WHO, 2009). The World Health Organization (WHO) defines a health system as comprising all organizations, people and actions whose primary intent is to promote, restore or maintain health. This includes efforts to influence determinants of health as well as more direct health-improving activities. It extends to inter-sectoral action by health staff, for example, encouraging the ministry of education to promote female education, a well-known determinant for better health (WHO, 2014b). The WHO Health System framework describes the individual components that make up the health system and includes six clearly defined building blocks that constitute a complete system: service delivery, health workforce, information, medical products, vaccines and technologies, financing and leadership/governance (WHO, 2009). The interconnectedness of these components is shown in Figure 4.1 below.

Figure 4.1: WHO Systems Thinking Interconnectedness



Source: WHO Systems Thinking 2009 pg. 31

Systems thinking considers human resources as one of six necessary ingredients in building up the health system with the overall goal of improving service delivery to the population. Any promising solution involving health professionals such as the one explored in this study (the scale-up of Clinical Officers) would need to be implemented not as a ‘magic bullet’ for improving health outcomes, but as one effort within a context in which all five other components were also strengthened.

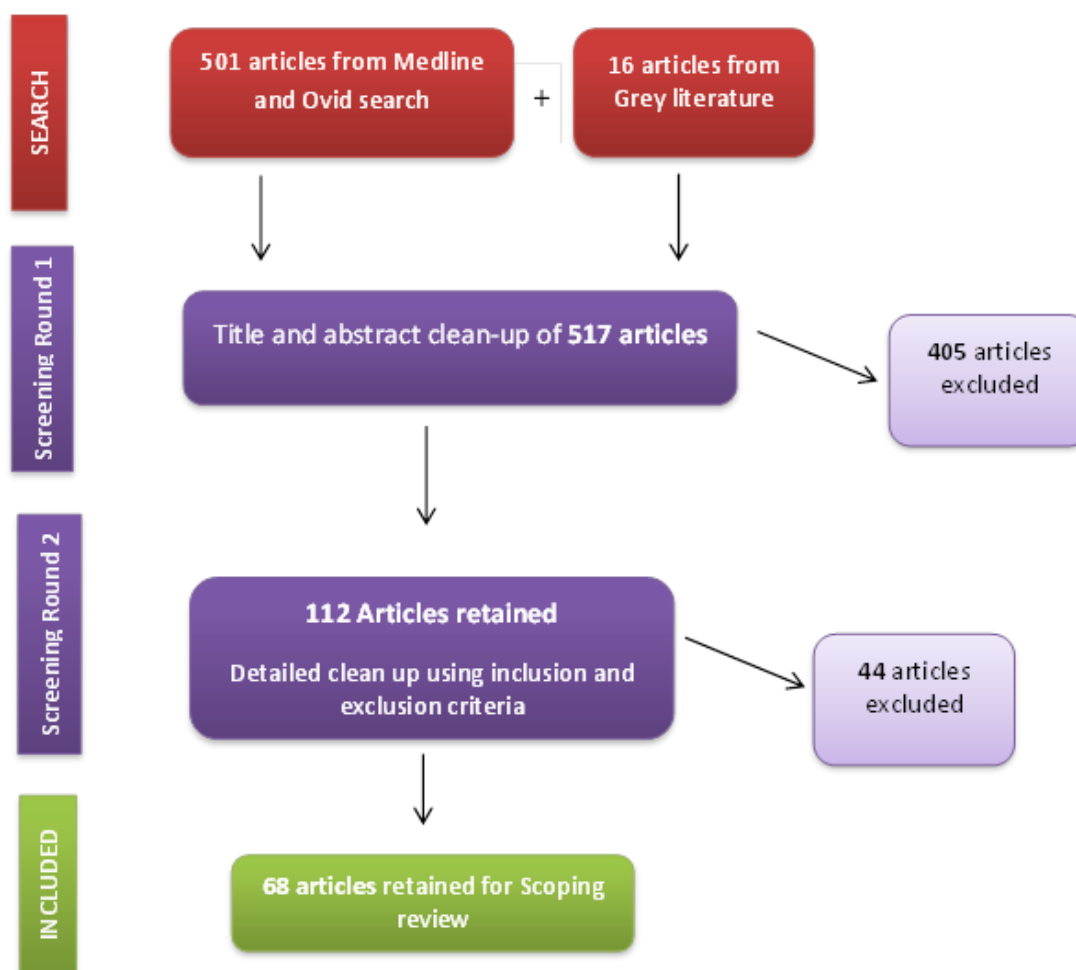
METHODOLOGY AND DATA ANALYSIS

The methodology was a single case study (Kenya) as described by Yin, and involved a scoping review followed by in-depth interviews with key informants in the Kenyan health system (2014). The case-study approach was chosen as it involves an iterative but linear process to the research (Yin, 2014). The scoping review followed methodology which involves 5 stages (Arksey & O'malley, 2005) . The review of the literature on mid-level workers was expanded to include sub-Saharan Africa, given the limited literature on mid-level workers in Kenya alone. Once the research questions were identified, 501 articles were found based on the search terms from journals including PubMed, Medline, Ovid and 16

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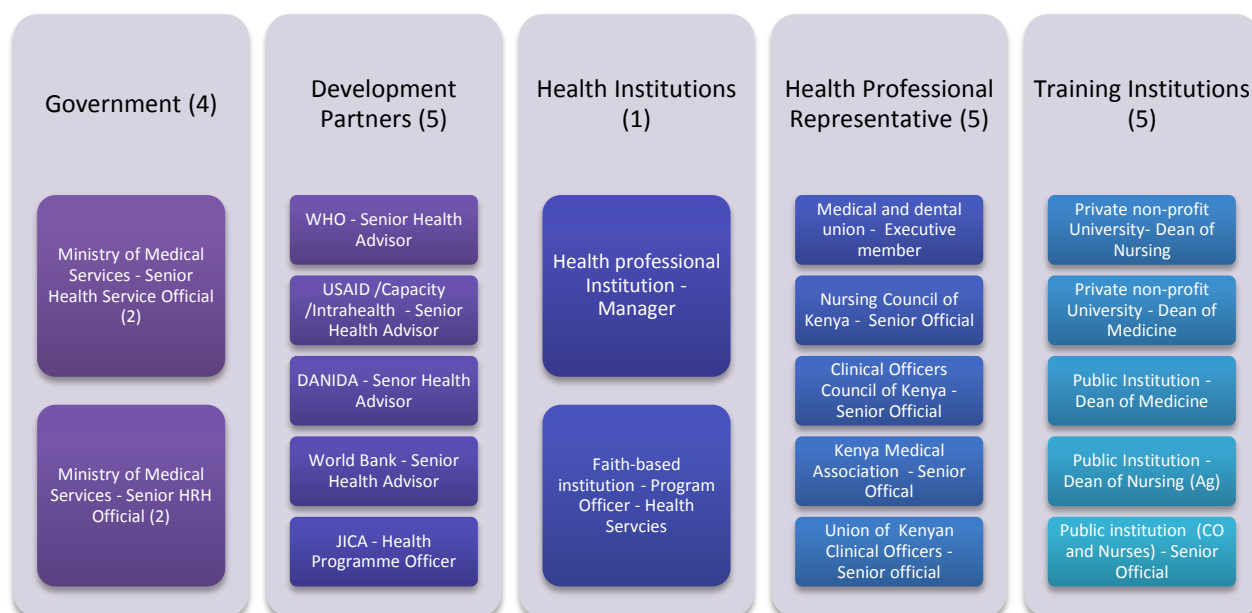
articles from grey literature which was sought from the Global Health Workforce Alliance (GHWA) website, the government of Kenya health portfolio online, the World Bank, UNICEF and other key relevant sources; the search strategy including the search terms used is available in Appendix I. . A title and abstract review as well as removal of duplicates resulted in 112 articles being retained. Inclusion criteria was based on whether the articles were geographically based in SSA, whether the health cadre described was mid-level workers, whether they were published between 2005 and 2015, and general relevance to the research questions. The 112 articles were further reviewed by content, and overall 68 articles were retained for review; articles that were outside of SSA, or that did not discuss mid-level health workers or did not relate to the research questions were excluded. Figure 4.2 below summarizes the process of the scoping review.

Figure 4.2: Flow chart for scoping review of literature on mid-level workers from sub-Saharan Africa



From the scoping review conducted on mid-level workers, the key themes which emerged from our analysis include issues of nomenclature of the cadre, their training and scope of practice, task-shifting, and the health outcomes. These were further analysed using the SWOT framework to examine the strengths, weaknesses, opportunities and threats to prioritizing mid-level workers. In-depth interviews were then conducted with 21 key informants (KIs) in Kenya including representatives from government (n=4), development partners (n=5), health professional associations (n=5), public and private training institutions (n=5) and health institutions (n=2) between August 2012 and February 2013. Figure 4.3 provides a matrix of the key informants who participated in the interviews.

Figure 4.3: Matrix of interviews conducted with Key informants



As part of the interviews, the KIs responded to questions on their perspectives on the role of Clinical Officers, and potential barriers and facilitators to their scale-up. Secondary data and documents were obtained from the KIs for inclusion in the scoping review, particularly those data and documents that were not readily available online.

Interviews were also conducted with 18 health professionals including doctors (n=4), nurses (n=6) and Clinical Officers (n=8). A balance of public and private institutions was ensured as well as a gender balance in the number of health professional interviews. Health professionals were asked the same questions that the KIs were asked concerning the potential scale-up of Clinical Officers. The figure below represents the interviews conducted with health professionals. In total 38 in-depth interviews were conducted with key informants and health professionals; Table 4.1 below summarises their profiles.

Table 4.1: Respondent characteristics – Health professional in-depth interviews (n=18)

	Doctors (N=4) % (n)	Nurses (N=6) % (n)	Clinical Officers (N=8) % (n)	All (N=18) % (n)
Gender				
Female	50% (2)	50% (3)	25% (2)	39%(7)
Male	50% (2)	50% (3)	75% (6)	54%(11)
Employer				
Public sector	75% (3)	83% (5)	25% (2)	61% (59)
Private for profit	25% (1)	17% (1)	75% (6)	19% (18)
Non profit	-	-	-	-

Data Analysis

Manual coding was used to further draw out themes both from the KIs and from the health professionals. Perspectives were analysed for synergies, similarities, differences and outliers. Following the transcription and translation the transcripts were re-read and manual open coding and identification of recurrent themes was performed (Ritchie & Spencer, 2002). The themes were then narrowed, and categorized by key emerging themes. Next, transcripts were reviewed and a focused coding was conducted (Hesse-Biber & Leavy, 2006). Participants' responses were compared with specific themes. A secondary SWOT analysis was conducted on the themes from the scoping literature review to categorize the themes on the strengths, weaknesses, opportunities and threats to scaling up the cadre of Clinical Officers (Dyson, 2004; Helms & Nixon, 2010). Interview findings were compared to the literature review and the secondary data and documents obtained from the KIs, and a summary was developed that captured the themes both from the literature and from the KI interviews.

SCOPING REVIEW ON MID-LEVEL WORKERS IN SUB-SAHARAN AFRICA

The 68 retained articles were examined for emerging themes; these included nomenclature of mid-level workers; training of mid-level workers; task-shifting and task-sharing and health outcomes from mid-level workers.

Nomenclature of mid-level workers

There are a number of ways in which mid-level workers are identified in the literature. Although mid-level workers seems to be the general term that encompasses the cadre, other names are used such as: *non-physician clinicians* (NPCs) (Bemelmans et al., 2010; Brentlinger et al., 2010; Callaghan, Ford, & Schneider, 2010; Ellard D et al., 2012); *physician assistants*, mostly in reference to mid-level workers in the USA, Scotland and South Africa (Buchan, O'May, & Ball, 2007; Couper ID & Hugo JF, 2014; Hooker RS & Everett CM, 2012; Legler, Cawley, & Fenn, 2007); *Clinical Officers*, mostly in reference to mid-level workers in Kenya, Uganda, Tanzania, Malawi and Zambia (Bradley & McAuliffe, 2009; Buwembo et al., 2012; Chilopora et al., 2007; Ellard D et al., 2012; Mbindyo et al., 2013); *clinical associates* in reference to mid-level workers in South Africa (Couper ID & Hugo JF, 2014; Doherty J, Couper I, & Fonn S, 2012; Doherty J, Conco D, Couper I, & Fonn S, 2013); and *tecnicos de medicina* (TMs) or *tecnicos de cirurgica* (TCs) with respect to mid-level workers in Mozambique (Brentlinger et al., 2010; Cumbi et al., 2007; Pereira, Mbaruku, Nzabuhakwa, Bergstrom, & McCord, 2011). The use of the term 'mid-level worker' varies in the literature and in some cases is a broad category that includes nurses; this paper excludes nurses from its use of the term mid-level worker as it is focused on the non-physician cadre of Clinical Officers.

Training of mid-level workers

One of the areas discussed in the literature is the training of mid-level workers. This theme is discussed through three sub-themes: length of training; areas of training and training gaps.

Length of training

The general length of training that is described in the literature for mid-level workers is 3-4 years. (Doherty J et al., 2013). In Kenya, the clinical officer is a cadre that has been in existence since 1929. Their training entails a 3-4 year diploma course followed by an internship that in most cases lasts

one year (Mbindyo et al., 2013). In Tanzania, Clinical Officers undergo 3 years of basic training (Brigley, Hosein, & Myemba, 2009). South Africa on the other hand just recently introduced the cadre of Clinical Associates in 2011 who are trained in 3 years; they are meant to contribute to district hospital care and help address HRH shortages.

Areas of training

In Malawi, mid-level workers received training in specialised care such as obstetrics and neonatal care which allowed them to have positive health outcomes in their practice (Ellard DR et al., 2014). Training in Malawi was also received in general surgery but within a narrow scope (Henry JA et al., 2015). Clinical Officers in Kenya can specialize into areas such as general surgery, anaesthesiology, obstetrics and gynaecology (KMTC, 2010). They are expected to run the lower levels of the primary health care system and to refer patients to higher levels such as district, provincial or national referral hospitals in situations where they are unable to handle the case (MOMS Kenya, 2010).

Training gaps and shortages

Despite the availability of trained mid-level workers, HRH shortages often persist. In Senegal, for example, not enough health workers were being trained at this level to meet population health needs. There was also resistance from senior academic clinicians who were not supportive of training this cadre as they were threatened by it, fearing it might then take their place (De Brouwere, Dieng, Diadhiou, Witter, & Denerville, 2009). Gaps in training were also identified in the literature. For example, in Tanzania, a need for support and training in counseling, syndromic management, drugs management, laboratory diagnosis, health education, resources, staffing and morale were identified (Brigley et al., 2009).

Despite the gaps or limitations in numbers, training of mid-level workers was found to be cost effective and more efficient than physician training, given that their training was shorter and less costly than that of medical doctors and specialised physicians (Henry J.A. et al., 2015).

Scope of practice

While the purpose for training and deployment of mid-level workers was generally supported within the health system and by other HRH cadres (with some exceptions as noted in Senegal), their scope of practice was unclear in many contexts.

Lack of clarity of scope of practice

Mid-level worker roles were not always well defined, especially with respect to other cadres such as doctors and nurses. In other cases, the lack of clarity on the scope of practice and/or the job descriptions led to inadequate support for proper training and deployment (Buwembo W, Munabi IG, Galukande M, Kituuka O, & Luboga SA, 2014). A lack of clarity of scope of practice combined with their lower status relative to doctors and sometimes nurses was associated with low levels of motivation among mid-level workers in Kenya, Nigeria, South Africa and Uganda (Fonn, Ray, & Blaauw, 2011). Doherty and colleagues highlighted the importance of being aware of sensitivities of medical and nursing professionals around the scopes of practice particularly when introducing the new mid-level worker cadre of Clinical Associates in South Africa (2012). From the literature, it is evident that there is a need for a clear scope of practice reinforced by training and development of mid-level workers to ensure quality of service delivery.

Task-shifting and its cost effectiveness

A sub-theme to scope of practice in the literature is task-shifting, where both positive and negative findings are apparent. The WHO defines task-shifting as “a process whereby specific tasks are moved, where appropriate, to health workers with shorter training and fewer qualifications. By reorganizing the workforce in this way, task shifting can make more efficient use of existing human resources and ease bottlenecks in service delivery...task shifting may also involve the delegation of some clearly delineated tasks to newly created cadres of health workers who receive specific, competency-based training” ((WHO, 2008b).

Chapter 4: Promising solutions to HRH shortages in Kenya - the scale-up of clinical officers

Positively, task-shifting to nurses and Clinical Officers was found to be successful in HIV/AIDS management and at the same time addressed the issue of HRH shortages (Brugha et al., 2010; Buwembo W et al., 2014; Emdin CA, Chong NJ, & Millson PE, 2013). Similarly, task-shifting to Clinical Officers from physicians was found to be cost effective for surgical service delivery and increased efficiency of health service delivery (Buwembo W et al., 2014; Callaghan et al., 2010; Fulton et al., 2011). Despite the low costs, quality was found to be uncompromised: apart from the successes in HIV/AIDS care above, a meta-analysis highlighted that male circumcisions were done safely by Clinical Officers, with reported adverse events similar to doctors and specialists (Ford N, Chu K, & Mills EJ, 2012). In Uganda, for example, a review of job descriptions of health professionals responsible for surgical services found that the bulk of direct patient related care was assigned to non-specialist cadres such as medical officers, who were physicians. The authors of this review suggest that an even lower-cost opportunity existed in task-shifting surgical service delivery to senior Clinical Officers (Buwembo W et al., 2014). A systematic review of delegation of tasks to cadres at lower levels than physicians found that a mid-level worker model was a potentially cost effective way of providing care rather than operating purely on a physician centered model (Callaghan et al., 2010).

In the negative findings, implementation of Zambia's policy on task-shifting was considered ineffective, particularly in rural areas, owing largely to a general deficit in overall clinical staff that combined with a lack of coordination with the national workforce to address health worker shortages (Brugha et al., 2010). Task-shifting, as noted earlier, was met with resistance in Senegal from senior academic clinicians for fear that Clinical Officers would replace them (De Brouwere et al., 2009). There were also negative health outcomes associated with task shifting policies where mid-level workers were not well trained; this will be further discussed under the health outcomes associated with mid-level workers.

Health outcomes for care by mid-level workers

Quality of care provided by mid-level workers is a concern that is often raised in the literature when their service delivery is compared to that of physicians.

Positive health outcomes of mid-level workers

Positive health outcomes were reported in a total of 36 of the studies retained in the scoping review covering various domains including, but not limited to, obstetrics and gynaecology, HIV/AIDS and ART, eye care, general surgical procedures, radiography and chronic disease management.

In obstetrics and gynaecology, mid-level workers were found to provide a large portion of the services in Ethiopia, Malawi, Mozambique and Tanzania (Chilopora et al., 2007; Ellard D et al., 2012; Gessesew, Barnabas, Prata, & Weidert, 2011; McCord, Mbaruku, Pereira, Nzabuhakwa, & Bergstrom, 2009; Nyamtema, Pemba, Mbaruku, Rutasha, & van Roosmalen, 2011; Pereira et al., 2007). In Tanzania, there was no significant difference between assistant medical officers (who are often Clinical Officers) and medical officers (who are often physicians) in outcomes, risk indicators or quality with respect to deliveries and major obstetrical operations (McCord et al., 2009). Similar results were reported in Ethiopia and Malawi (Chilopora et al., 2007; Gessesew et al., 2011). Overall, mid-level workers had similar health outcomes compared to physicians in HIV/AIDS care (Brentlinger et al., 2010; Brugha et al., 2010; Callaghan et al., 2010; Cettomai D et al., 2011; Emdin CA et al., 2013; Laker-Oketta MO et al., 2015; McGuire M et al., 2013; Sherr KH et al., 2010; Vasan A et al., 2009; Zachariah et al., 2009).

Specialised mid-level workers played a key role in eye-care (du Toit & Brian, 2009; Gichangi M et al., 2015; Palmer JJ et al., 2014; Tyson AF et al., 2014); and in surgical procedures, such as orthopaedics (Cumbi et al., 2007; Mkandawire, Ngulube, & Lavy, 2008; Tindall, Steinlechner, Lavy, Mannion, & Mkandawire, 2005; van Amelsfoort, van Leeuwen, Jiskoot, & Ratsma, 2010). In Malawi, where there are only nine orthopaedic surgeons, the scale-up of training of specialised Clinical Officers since 1985 resulted in a lower cost of training of over 117 orthopaedic Clinical Officers, 82 of whom were in active

practice as of 2008 (Mkandawire et al., 2008). Mid-level workers have been effective in radiography where chest radiograph screening was successfully done (Hoog AH et al., 2011; Kaguthi G et al., 2014). Mid-level workers were reported to safely conduct male circumcisions in Uganda and Kenya (Buwembo et al., 2012; Frajzyngier V, Odingo G, Barone M, Perchal P, & Pavin M, 2014). A meta-analysis found that non-physician clinicians could conduct male circumcisions has similar rates of adverse events to doctors and specialists (Ford N et al., 2012). Chronic disease management was also safely conducted in Cameroon provided the right equipment was available for use to detect hypertension and diabetes (Labhardt, Balo, Ndam, Grimm, & Manga, 2010)

Negative health outcomes of mid-level workers

In some cases, mid-level workers were associated with poorer health outcomes than their more specialised counterparts. Two studies from Malawi found that the impact of mid-level health workers on maternal, neonatal and child mortality could not be fully ascertained, and still needed further research (Ellard D et al., 2012; Ellard DR et al., 2014). A third study also from Malawi found that Clinical Officers had a high newborn case fatality rate and recommended that additional training could be used to fortify the cadre so as to reduce the frequency of adverse events (Hounton, Newlands, Meda, & De Brouwere, 2009). Although it was cheaper to use Clinical Officers in emergency obstetric care compared to specialists such as obstetricians and gynaecologists, Clinical Officers were associated with high newborn case fatality rates in Burkina Faso (Hounton et al., 2009). A meta-analysis by Wilson and colleagues found that although Clinical Officers are associated with similar findings for maternal death and perinatal death compared to doctors, they were associated with higher incidences of wound infection and opening up of wounds post-operation (Wilson et al., 2011). In Mozambique, the *Técnicos de Medicinas* (mid-level workers) were in most of the cases unable to provide the correct WHO clinical stage for HIV/AIDS diagnosis (Brentlinger et al., 2010).

Table 4.2: Positive and negative health outcomes related to mid-level workers from the literature review

Positive health outcomes	Countries	References
Obstetrics and gynaecology including maternal and child care	Ethiopia, Malawi, Mozambique, Tanzania	Chilopora et al., 2007; Ellard D et al., 2012; Gessessew, Barnabas, Prata, & Weidert, 2011; McCord, Mbaruku, Pereira, Nzabuhakwa, & Bergstrom, 2009; Nyamtema, Pemba, Mbaruku, Rutasha, & van Roosmalen, 2011; Pereira et al., 2007.
Eye-care	Kenya	du Toit & Brian, 2009; Gichangi M et al., 2015; Palmer JJ et al., 2014; Tyson AF et al., 2014
Orthopaedics	Malawi	(Cumbi et al., 2007; Mkandawire, Ngulube, & Lavy, 2008; Tindall, Steinlechner, Lavy, Mannion, & Mkandawire, 2005; van Amelsfoort, van Leeuwen, Jiskoot, & Ratsma, 2010)
Radiography	Kenya	(Hoog AH et al., 2011; Kaguthi G et al., 2014
Male circumcisions	Uganda, Kenya	(Buwembo et al., 2012; Frajzyngier V, Odingo G, Barone M, Perchal P, & Pavin M, 2014)
Chronic disease management	Cameroon	(Hoog AH et al., 2011; Kaguthi G et al., 2014
Negative health outcomes	Countries	References
Maternal, neonatal and child mortality/obstetrics and gynaecology	Malawi, Burkina Faso	Ellard D et al., 2012; Ellard DR et al., 2014; Hounton, Newlands, Meda, & De Brouwere, 2009; Hounton et al., 2009; Wilson et al., 2011)
HIV/AIDS diagnosis	Mozambique	Brentlinger et al., 2010

Summary

From the literature review, there are various ways in which mid-level workers are referred to including but not limited to non-physician clinicians, Clinical Officers and clinical associates. There are varied training durations but on average their training is 3-4 years in length and almost always shorter than that of physicians. The scope of practice is an area that needs to be well-defined in order to ensure clear roles not only for mid-level health workers but also for how they relate to other cadres, mainly doctors and nurses. These cadres generally have the same health outcomes as physicians, although in some areas they may have a higher rate of negative health outcomes. Specialised training may be

required to ensure that quality of care is not compromised even as health systems aim to be more efficient and cost-effective in service delivery.

The themes from the scoping review were re-clustered using the SWOT analysis and the following summary was developed. Overall there were more strengths and opportunities than there were weaknesses and threats. That being said, the negative health outcomes must not be minimized and care must be taken in scaling-up mid-level workers to ensure that patient safety is above all upheld. This applies particularly to the context of resource constraints and HRH shortages which continues to be the reality in many countries in sub-Saharan Africa, including Kenya.

Table 4.3: Summary of SWOT analysis of scoping literature review

SWOT Analysis	Explanation	Study/Studies Associated
Strengths		
Nomenclature varies from context to context	The definition of the mid-level worker is localised and varies depending on country and context - they are less likely to migrate as the skills/cadre is often only recognized in the local country or region.	Bemelmans et al 2010; Brentlinger et al 2010; Callaghan, Ford & Schneider, 2010; Ellard D. et al 2012; Buchan, O'May & Ball 2007; Couper 2014; Hooker R.S. & Everett CM 2012; Legler, Cawley & Fenn 2007; Bradley & McAuliffe, 2009; Buwembo et al., 2012; Chilopora et al., 2007; Ellards D 2012; Mbindyo et al 2013; Couper & Hugo 2014; Doherty et al 2012; Cumbi et al 2007; Pereira et al 2011.
Length of training	3-4 years and therefore less costly than physicians or specialists which is likely to be less costly for the health system.	Doherty et al 2013; Mbindyo et la 2013; Brigley, Hosein & Myemba 2009; Ellard DR et al 2014; Henry, J.A. 2015; MOMS Kenya 2010.
Areas of training	Providing specialised care and varied scope of care including obstetrics, neonatal care, surgery, anaesthesiology which could be a potential for career development for mid-level workers in country	Ellard D.R.et al., 2014; Henry J.A. et al., 2015; KMTC, 2010; MOMS Kenya, 2010.
Positive health outcomes associated	Similar health outcomes and no significant different compared to physicians/specialised health professionals	Chilopora et al 2007; Ellard, D et al. 2012; Gessesswe, Barnabas, Prata & Weidert 2011; McCord et al., 2009; Nyamtema et al 2011; Pereira et al 2007; Brentlinger et al 2010; Brugha et al 2010; Cettomai et la 2011; Emdim et al 2013; Laker-Oketta et al 2015; McGuire et al 2013; Vasan et al 2009; Zachariah et al 2009

SWOT Analysis	Explanation	Study/Studies Associated
Mid-level workers already well integrated into the health system	They are already handling responsibilities and performing the bulk of direct patient care	MOMS Kenya, 2010; Buwembo et al., 2014; Chilopora et al 2007
Task shifting successfully done	Task shifting found to be cost effective without compromising quality of care in HIV/AIDS care and management, male circumcisions, surgical service delivery.	Bruggha et al., 2010; Buwembo et al., 2014; Emdin et al., 2013; Callaghan et al., 2010; Fulton et al., 2011;
Weaknesses		
Negative health outcomes	High newborn case fatality rates; higher incidences of wound infection and opening of wounds post operation ; poor diagnosis in HIV/AIDS	Hounton et al 2009; Wilson et al 2011; Brentlinger et al 2010; Ellard et al 2012; Ellard et al 2014
Lack of clarity of scope of practice	Often leading to low motivation can also lead to negative health outcomes	
Task shifting not successful	Shortages of staff don't permit implementation of task-shifting policy	Brugha et al 2010;
Opportunities		
Potential to improve the training and scope of practice	Could reduce the adverse health outcomes and fortify the gaps in training	Doherty et al 2013; Hounton et al 2009;
Potentially cost-effective	More affordable than a physician-centered system; savings anticipated in surgical service delivery	Buwembo et al., 2014; Callaghan et al 2010; Henry J.A. et al 2015
Threats		
Task shifting resistance by senior academic clinicians	Resistance to the cadre and their effective training by senior academic clinicians	De Brouwere, Dieng Diadhiou, Witter & Denerville, 2009; Brigley et al. 2009
Specialized training	Although mid-level workers would exist in the system, they would not be providing primary care so shortages would persist	Henry J.A, et al 2015; De Brouwere et al. 2009;

KEY INFORMANT FINDINGS FROM KENYA

Data from the Kenyan key informants (KIs) were first analyzed thematically, and then the thematic analysis was re-clustered using a SWOT format to focus on the question of whether, or how, to scale up the clinical officer cadre in Kenya as a response to continuing HRH shortages. These findings build on the mapping of the themes which emerged out of the literature to a SWOT format.

Strengths in the utilization and scaling up Clinical Officers

From the interviews with the key stakeholders and health professionals, a number of strengths of clinical officer utilization emerged. These include the length of training of Clinical Officers compared to doctors, the fact that Clinical Officers are already integrated into the health system, the training of Clinical Officers which occurs in rural areas, and the low likelihood of migration of Clinical Officers.

Length of training

Clinical officer training in Kenya is shorter than that of medical doctors, a 3 year diploma and 1 year internship compared to 5 years plus 1 year internship. The shorter length in training of Clinical Officers implies that they can be scaled-up faster than medical doctors in terms of training. This would require that they be absorbed either into the public or private system.

Integrated into the health system and into the community

One of the strengths identified by KIs is that Clinical Officers are and have been an integral part of the Kenyan health system for many years and within this role, they are considered 'critical':

"Mid-level workers have always maintained the health sector so expanding them would be a great thing" – KI Interview 4, Health Professional Representative

"Clinical Officers are very very important cadres because they are the first class." – KI interview 19, Senior Government Health official

"Oh they are very critical! Extremely critical! I think we can't do without them. There are some people who think otherwise but if I am looking at a primary health care approach, you really cannot do without them. They are very critical in the system." – KI Interview 1, International Development partner

Clinical Officers themselves echoed the perspective of KIs regarding the importance of their role in the health system:

"Clinical Officers are important...you'll find that in a given area the hospital is an institution that is run by a CO...he is like the doctor because he is the one who is managing that particular institution" – HPCO 4, Private Sector Male Clinical Officer

“Clinical Officers are there to help reduce the workload for the doctors.”—HPN 6, Public Sector Female Nurse.

Clinical Officers are often well integrated into the community. Indeed for the community that they serve, they are often considered doctors, and their scale-up would therefore be welcome by the community who currently have a positive view towards them.

“In the community everybody is a Daktari [medical doctor] even a clinical officer...so what is most important for the community people is that they need to know what services they should be able to expect from the different level of services.” – KI interview 1, International Development partner

“The community doesn’t know that there is a difference between a medical officer or a clinical officer. All they know is that there is a doctor and a nurse. That is all they know. So for the patients they call us all Daktari [doctor]”. – HPCO 5, Private Sector Female Clinical officer

While this might not be an issue in the rural areas where there are fewer doctors, it speaks to the potential for some push-back protectionism by the medical profession. Doctors likely do not want non-physicians to be considered the same particularly because Clinical Officers are meant to refer complicated cases to them.

Trained in rural areas

One of the strengths of Clinical Officers is that they are more likely to serve the rural populations particularly because their training is often rural-based:

“As you may know, most of the population is rural-based and service providers in those rural areas in those outposts are usually these mid-level workers.” – KI interview 12, International Development Partner

“All our disciplines, all the courses we offer require that our student spend time in the rural areas. So they go to rural health facilities and that is part of their training.” – KI interview 18, Senior Official, Clinical Officer training Institution

This is in contrast to the training of medical doctors who are mostly trained and located in urban areas. Training in rural locales is a policy recommendation by the WHO as promising practice to retain HRH in rural areas (WHO, 2010a).

Less likely to migrate to other countries

Another strength identified in the scale-up of Clinical Officers is the low likelihood that they would migrate to other countries.

“Clinical Officers are I think only recognized in East-Africa and probably Botswana or something, so if I have to relocate it has to be in East Africa otherwise if it has to be outside then I am jobless and I don’t have any papers. So I am not thinking of migrating.” – HPCO 1, Private Sector Female Clinical Officer interview

“It is not very common [for Clinical Officers to migrate]... it looks like there is no demand. Their service is not in demand in those [destination] countries...they tend to work in their occupation but are rarely found internationally” – KI interview 18, Senior Official, Clinical Officer Training Institution

Overall, the strengths of Clinical Officers are that they have a shorter training than medical doctors, they are already integrated into the health system of many communities and are less likely to migrate due to lack of transferability of skills.

Weaknesses in the utilization and scaling up Clinical Officers

Some additional weaknesses than those identified in the literature came up in the interviews. Clinical Officers have a limited scope of practice and lack career progression opportunities. Those that are able to go into specialised training as a step towards career development generate the unintended consequence of further limiting the numbers of generalist Clinical Officers available. The surplus of Clinical Officers identified by interviewees signal a weakness in that there are more trained professionals than the government can absorb, but also a potential opportunity as these persons comprise a pool of already trained professionals waiting to be hired.

Lack of career progression opportunities

One of the weaknesses that emerged from the interviews with key informants and health professionals was the lack of career progression opportunities for Clinical Officers. Despite their training

being only 2 years less than that for physicians, they are not able to bridge into medicine even after several years of clinical practice.

“I would wish to update my diploma to a higher diploma but it’s a lot of money to do a higher diploma...it’s really expensive.” – HPCO 8, Private Sector Male Clinical officer

Clinical Officers are also not able to do a Master’s degree program as their program counts as a diploma rather than a Bachelor’s degree. While this means that they are less likely to migrate, it also means that the Clinical Officers are frustrated and unable to progress in their career. They are able to do a higher diploma which would allow them to specialize, but this still maintains them within the clinical officer field with limited opportunities beyond that and the additional training is costly.

Limited resources in government to absorb trained Clinical Officers

A key weakness identified by the participants is lack of public employment opportunities.

Although there are increasing numbers of Clinical Officers being trained, the government is not able to absorb them into the public system.

“We take about 20-30% [of the applicants] because of lack of capacity to accommodate everybody...even on the few we train, few in quotes, not all of them are absorbed. So the demand is there but the government is not able to absorb them because of lack of funds to pay them. So we have unemployment problems.” – KI interview 18, Senior Official, Clinical Officer Training Institution

“Seventy per cent of Clinical Officers that are trained in Kenya are in the private sector...it is not their will to be in the private sector, there are no employment opportunities in the government...for the last 5 years there has be no intake for Clinical Officers to the government”. – HPCO 8, Private Sector Male Clinical Officer

A previous study found that in the context of Kenya, the government is considered the best employer and most health professionals would rather work within government than in the public sector (Dogbey, Bourgeault, Labonté, & Deonandan, 2016; Dogbey et al., 2016a). Doctors and nurses have had improved working conditions but for Clinical Officers, challenges remain with regards to both employment opportunities and working conditions in the public sector.

Clinical Officers going into specialised training

There is a further challenge of Clinical Officers going for specialised training within the clinical officer cadre. While this is something positive for the individuals, it means there are fewer generalist Clinical Officers who are more needed in rural areas.

“...the few we are producing are so variable that we are even making them specialists. So you have them trained in anaesthesia, you know...specialist areas. But we need a general, more of general Clinical Officers in the primary care units” – KI Interview 1, International Development Partner.

This issue speaks to the policy challenge of finding a balance between the need for Clinical Officers in rural areas and availing opportunities to them for further career development.

Limited scope of practice

A final weakness identified was the limited scope of practice of Clinical Officers especially from the perspective of more highly trained health professionals. Medical doctors and some health professional representatives argued that a clinical officer cannot replace a doctor as their training is less rigorous. Although there are training opportunities such as specialised higher diploma training for Clinical Officers, they were still viewed as having a limited scope of practice.

“I think their training is limited and therefore they need to be limited in how much they can do...they should be regulated so that they don’t overstep the boundary” – HPD 4, Public Sector Male Doctor

“If I am a senior nurse trying to do a doctor’s job then that is not what I have been trained for. Same with Clinical Officers doing a surgeon’s job...that is not what they were trained for.” – KI Interview 5, Dean of Medicine, Private not-for profit training institution

“[S]ometimes [Clinical Officers] want to do things that are beyond them...instead of referring sometimes we have problems because people are tempted to do things that they are not trained to do”. – KI Interview 13, Senior official, Medical Doctors Representative

Opportunities for scaling up Clinical Officers

Surplus of unemployed Clinical Officers

Two senior government officials noted that there is large number of unemployed Clinical Officers. This is a key finding as it points to a large potential of mid-level workers who could be hired and deployed in rural areas.

“This country needs more than 50,000 nurses. Right now not more than 5,000 nurses are unemployed, and about 3,000 Clinical Officers are unemployed.” – KI Interview 19, Senior Government Health Official

A clinical officer also echoed that there was surplus in the market of those who were not yet absorbed by the government:

“In our class we were over 110 students, and that’s just from my college. If you count Nairobi, Mombasa, Nakuru, there are so many Clinical Officers...so around 1000 are qualified and you can imagine 1000 per year who are not unemployed” – HPCO 8, Private Sector Male Clinical Officer.

The clinical officer in this case is referring to the fact that there are several new Clinical Officers who graduate each year but who are unable to find positions within the government and who often end-up unemployed.

Creation of BSc program in Clinical Medicine

One of the encouraging points raised by the key informants and the health professionals are the steps that have been taken to raise the profile of Clinical Officers in Kenya since 2010. These include creation of a Bachelor of Science program that would increase their competencies and skills. The initiative of developing this program was supported in principle and financially by development partners whose involvement influenced the government priority due to their clout in the health system.

“We now have three universities that have been approved to offer the BSc. program and a fourth university is developing a curriculum.” – KI Interview 15, Senior Official, Clinical Officer Council

“We have worked with the Clinical Officers’ council to develop a good curriculum which is now approved and which universities have adopted for a BSc in Clinical Sciences.” – KI Interview 7, International Development Partner.

The goal of the program is to improve on the training of Clinical Officers, upgrade their training from diploma to degree level and open up the cadre to opportunities such as Masters and/or PhD training (COC Kenya, 2011).

Shortage of health professionals in rural areas

Another health system challenge that is an opportunity for scaling up of Clinical Officers identified was the continuing shortage of health professionals in general and Clinical Officers in particular in rural areas. Clinical Officers who are trained in rural areas would be well placed to serve the rural populations. The aforementioned surplus of trained and unemployed Clinical Officers presents an opportunity for scale-up. One of the points raised was that scale-up of Clinical Officers does not need to be at the expense of other cadres:

“Clinical Officers may not fill-in the role of doctors but they can take up expanded roles that can help.” – KI Interview 4, Senior Official, Nursing Council

“You see that’s the advantage of Clinical Officers – it is not an either/or. Both [doctors and Clinical Officers] are needed. The doctors have their role and at the community level, the primary care level the Clinical Officers have their role” – KI Interview 1, International Development Partner

Threats against the utilization and scaling up of Clinical Officers

Protectionism by health professionals and policy makers

Although steps have been taken to create a BSc program in clinical medicine, this has been met with resistance from medical doctors. But beyond the BSc program, there is overall protectionism on a policy and advocacy level particularly from doctors who are also most of the health policy makers.

“The doctors were totally against [the BSc program]...they were saying ‘these are pretender doctors, let them go through the pain of being a doctor, you are sneaking them in for a short

course'...but the system really needs Clinical Officers and clinicians for that matter". – KI Interview 7, International Development Partner.

"There is a lot of other politics in this ministry...doctors think that everything the ministry does should be for them but when you look at service delivery, the people who are really carrying the health system are nurses and Clinical Officers". – KI Interview 20, Senior Government Health Official.

Further resistance has been expressed by nurses; two of the nurses interviewed, noted that scale-up of Clinical Officers ought to be considered in the context of the other cadres.

"Nurses would feel left out because they play a great role in the hospital, and I feel medical officers would feel like...they would feel threatened because they would feel like Clinical Officers are taking over their place" – HPCO 5, Private Sector Female Clinical officer

"I think it is the nurse who is important to scale-up...the clinical officer just see the patient and the nurse does the rest...even if you scale-up Clinical Officers, it won't help in relieving our workload and everything because the work would remain the same if the same number of nurses are there" – HPN 5, Public Sector Female Nurse

Lack of representation for Clinical Officers

Another threat identified was the lack of representation for Clinical Officers particularly due to a lack of a union.

"I think the only thing that COs have is a council that registers you. We don't have a union...so we can't fight for our rights with the government." – HPCO 1, Private Sector Female Clinical Officer

Medical doctors for example are represented through the Kenya Medical Dental and Pharmacists Union (KMPDU) that is officially registered. Clinical Officers on the other hand do not have such a body and the government has been resistant to registration of a Clinical Officers' union.

Resistance to task-shifting as a policy initiative

There was a general and overarching resistance to the term "task-shifting" with respect to a policy solution. Task-shifting was viewed as a policy that created a battle between the cadres rather

than fostering positive working relationships between them and was also viewed as an imposed solution rather than one that emerged from within the Kenyan context.

“You don’t want to use task-shifting...as a tool in the battle between different cadres which it seems that that’s what is happening to the whole push for task shifting. One or two groups of cadres feel like that ok now you are going to strengthen one cadre and dump more work on one of the other cadres.” – KI Interview1, International Development Partner

“I would rather task-sharing than task-shifting...so that you are expanding the role of people who are skilled not unskilled. Because when you talk about task-shifting in our context it means that you are dumping tasks on somebody else who didn’t go to school or went to school for 6 weeks and yet you are talking about human lives. So that annoys us as regulators.” – KI Interview 4, Senior Official, Nursing Council

As the senior nursing official sarcastically notes above, there are frustrations with blanket policies that are viewed ultimately as dumping of tasks upon lower cadres of health professionals who are not considered to be as qualified as their counter parts, in this case Clinical Officers compared to nurses or doctors.

DISCUSSION

The findings of this research are consistent with the literature on Clinical Officers specifically and mid-level workers in general summarized in Table 4.4.

Table 4.4: Summary of SWOT analysis for scale-up of Clinical Officers from Key Informants

Strengths		Weaknesses	
Macro		▪ Limited resources in government to absorb trained COs	
Meso	<ul style="list-style-type: none"> ▪ Length of training compared to doctors ▪ Integrated into the health system and community 	<ul style="list-style-type: none"> ▪ Limited scope of practice ▪ Lack of career progression ▪ Few trained COs going into specialised diploma training 	
Micro	<ul style="list-style-type: none"> ▪ Less likely to migrate to other countries ▪ Trained in rural areas 		
Opportunities		Threats	
Macro	▪ Surplus of unemployed COs	▪ Protectionism of the medical field health professionals and policy makers	

Meso	<ul style="list-style-type: none"> ▪ Shortage of health professionals in rural areas 	<ul style="list-style-type: none"> ▪ Lack of representation for COs and their needs to the government ▪ Resistance to task-shifting as a policy response
Micro	<ul style="list-style-type: none"> ▪ Creation of a BSc program in Clinical Medicine 	

At a meso level, the shorter training of mid-level workers in general and Clinical Officers specifically emerged from the literature and the KI interviews (Brigley et al., 2009; Doherty J et al., 2013; Ellard DR et al., 2014; Henry JA et al., 2015; Mbindyo et al., 2009). Another strength identified both in the scoping review and from the key informant interviews was the fact that Clinical Officers are well integrated into the health system (Buwembo W et al., 2014; Chilopora et al., 2007; MOMS Kenya, 2010). Clinical Officers are readily accepted by patients, who were found to be happy with service delivery from Clinical Officers in Malawi (Muula, 2009).

At a micro level and while not explicitly stated in the literature, the localised nature of the mid-level health workers often means that they are less likely to migrate given that their skills are not recognized outside of the local region (Brentlinger et al., 2010; Brigley et al., 2009; Fonn et al., 2011; Mbindyo et al., 2009); this emerged from the key informant interviews as the Clinical Officers from Kenya were not recognized outside of East Africa. This is a strength from the health system perspective in terms of retention but a weakness from the clinical officer perspective, as they have limited career progression and mobility. Also at a micro level, the training of Clinical Officers in rural areas was a new theme that emerged from the KI interviews. The location of training seems to influence individual health professional decisions with regards to area of practice following training. As noted, the WHO promotes rural training as a promising practice for retention (WHO, 2010a). A potential area for further research would be a research question exploring the relationship between location of training and the likelihood of practice.

Chapter 4: Promising solutions to HRH shortages in Kenya - the scale-up of clinical officers

With regards to the weaknesses at a macro level, the inability of government to absorb trained Clinical Officers speaks to the overall limitations in terms of resources available for scale-up not only of Clinical Officers but also of other health professionals. In the case of clinical officers, one of the challenges is likely a lack of prioritization of Clinical Officers within policy debates and resource allocation. While the overall health financing challenges faced by health systems in developing countries are not unique to Kenya, Kenya's case is unique in that the government has made concerted efforts to increase funding to the public health sector the impact of which has been felt by doctors and nurses but not by Clinical Officers (Dogbey, Labonte & Bourgeault, 2016). From a systems thinking perspective, this is a major weakness that limits governments such as Kenya from meeting their human resource needs. Given the opportunity that Clinical Officers present to address the shortages of health professionals at a limited cost, there is need for governance, advocacy and policy mechanisms to scale-up this cadre.

At the meso level, an emerging weakness from the KI interviews consistent with the literature, is the issue of scope of practice. Health professionals and policy makers agreed that there was a need for adequate training for Clinical Officers to ensure quality of service was not compromised. Furthermore a need for a clear scope of practice between cadres was identified as important as noted by Doherty and colleagues (2012) and Buwembo et al (2014). The lack of career progression emerged tangentially in the scoping review but was identified as a key weakness of the CO profession.

At a macro level, the large surplus of about 3,000 unemployed Clinical Officers was a key opportunity for the health system in Kenya. Although there are resource constraints within the government, priority shifting could result in these Clinical Officers being absorbed and deployed into rural areas where there is a high need for them, thereby addressing issues of shortages and improving access for vulnerable populations. This would require political will backed by financial resources or reallocation within the health system. Development partners could play a role in influencing such a shift

in priorities and resource allocation given their role in influencing the development of the Bachelors program in clinical medicine.

At a meso level, the opportunity identified is the shortage of health professionals particularly in rural areas. As discussed in the literature, the training of Clinical Officers in rural areas predisposes them to work in the areas where they trained. Further work would be required to explore the necessary elements so that the health system can benefit from this opportunity. Finally at a micro level, the steps necessary to upgrade the diploma clinical officer program into a baccalaureate program are unique to Kenya and did not emerge in the literature. The newly developed program creates career development opportunities for new and existing Clinical Officers. This could be a knowledge area that could be shared with other countries where Clinical Officers face frustrations of demotivation and lack of career progression opportunities (Bradley & McAuliffe, 2009; Chandler et al., 2009; McAuliffe et al., 2009).

One of the threats to scale-up of Clinical Officers was the resistance particularly by medical doctors and policy makers mostly with the argument that a clinical officer cannot replace a doctor and that patient safety could be compromised. From the literature, Clinical Officers achieve similar health outcomes as physicians in a number of areas including HIV/AIDS care, general surgery, male circumcisions and maternal and child health (Brugha et al., 2010; Chilopora et al., 2007; Ford N et al., 2012; Gessesew et al., 2011; McCord et al., 2009). At a meso-level, better representation is necessary for Clinical Officers in the context of Kenya to ensure that their voice is heard and not drowned by medical doctors and other senior policy officials who may not have an appreciation for the potential of Clinical Officers in the health system and service delivery.

While task shifting is often discussed positively in the literature, there was resistance from both health professionals and policy makers because it was regarded as a dumping of responsibilities outside

of a broader health systems planning process. Implementation of a task-shifting approach to scale-up of Clinical Officers in Kenya would need to take into account this resistance to ensure its success.

CONCLUSION

A great potential lies in the mid-level cadre of Clinical Officers in Kenya. The strengths of the cadre particularly in Kenya include the fact that they are less able to migrate and that their shorter training means that a large number of Clinical Officers can be deployed to rural areas more cost-effectively than doctors and nurses. This shorter training period means that a clinical officer cannot replace a doctor. From the literature review, mid-level workers have, for the most part, produced similar health outcomes as physicians in the most common clinical areas that they would encounter in rural areas. A key hindrance to the scale-up of Clinical Officers in Kenya's context is the lack of resources to absorb them into the health system. This is in part related to the limited resources available in a country such as Kenya and could also be related to the limited representation that Clinical Officers have compared to the advocacy machines that doctors and even nurses have in the same context. Development partners have played an important role in pushing through initiatives such as the Bachelor of Science program and could be a key ally in supporting the scale-up of this cadre. There is little point in scaling up Clinical Officers, if they, and other health cadres, become frustrated due to lack of medical supplies, or if Clinical Officers lack career development opportunities and support from higher levels within the health system. A health systems perspective that takes into account all the prerequisite conditions for the success of health professionals is critical at multiple levels, so that Kenya does not end up with a health workforce it cannot afford to sustain both financially and in terms of infrastructure.

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Chapter 5: General Discussion and Conclusion

SUMMARY OF FINDINGS

The goal of this research was to explore the source country perspectives of the migration of health professionals from Kenya using a systems thinking approach. The three phases of the research - presented in the form of three manuscripts - addressed the study's three objectives which were to 1) conduct a contextual analysis of human resources for health in Kenya; 2) understand the migration perspectives of doctors, nurses and Clinical Officers, and 3) explore the role of mid-level health worker cadre and specifically the cadre of Clinical Officers as a promising practice.

The first paper found that there have been significant developments in the policy context of managing health professionals in Kenya, all of which have improved working conditions for health professionals (Dogbey et al., 2016a). Kenya has undergone two iterations of the human resources for health policy (MOH Kenya, 2014; MOMS Kenya, 2009), as well as the development of an overall health policy (MOMS Kenya. & MPHS Kenya., 2012) defining the future priorities for the health system. The reorientation of social and health services towards the Vision 2030 (Government of Kenya, 2007) and the promulgation of a new constitution (Government of Kenya, 2010) have placed health at the centre of policy and governance (Dogbey et al., 2016a). Kenya has also significantly increased the resources towards the public health sector compared to the private sector (World Bank, 2016). International migration was found to have decreased in recent times and was not deemed be a policy priority by government and development partner stakeholders, although health professionals themselves disagreed. This is a critical paradox that must be taken seriously by Kenyan health policy officials. Working conditions were improved mainly for doctors and to some extent for nurses; Clinical Officers' working conditions had barely improved (Dogbey et al., 2016a; Dogbey, Bourgeault, & Labonté, 2016b). Health professional representatives asserted that they continue to be disgruntled with the current

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situation and would not hesitate to migrate given the opportunity (Dogbey et al., 2016). While progress has been made in the overall policy context, there continues to be a disconnection between health professionals' needs compared to government priorities and efforts with respect to HRH.

The second paper found that the factors that discourage health professionals from staying in Kenya are similar to those available in the literature (Dogbey et al., 2016) and include: dissatisfaction with remuneration, governance, working conditions and living conditions (Mbindyo et al., 2009; Peters, Chakraborty, Mahapatra, & Steinhardt, 2010; Tache S & Schillinger D, 2009). There were high levels of dissatisfaction with the overall government efforts with respect to management of the health system, security, the environment and taxation (Dogbey et al., 2016). Dissatisfaction did not necessarily translate into steps towards out-migration. Of those health professionals considering migration, few had made concrete plans to leave. Family ties and fear of the unknown were found to be strong 'stick' factors for continuing to remain in Kenya. Unlike in the literature where public to private sector internal migration was considered to be prevalent, job security was found to be higher in the government public sector due to improved working conditions, salaries and benefits. Recruitment agencies were not found to play a significant role in migration decisions of health professionals from Kenya, which was congruent with key informants' perspective that migration is no longer an area of concern in Kenya. This view contradicts the perspective in the literature which calls for an end to what some authors have described as poaching of health professionals by destination countries (Attaran, A., Walker, R. B., 2008; Mills et al., 2008; Snyder, 2009).

The third paper on Clinical Officers found from the literature, that they generally have similar health outcomes as their medical counterparts in multiple domains including obstetrics and gynaecology, radiology, orthopaedics and HIV/AIDS (Brentlinger et al., 2010; Cettomai D et al., 2011; Chilopora et al., 2007; Ellard D et al., 2012; Gessesew et al., 2011; Laker-Oketta MO et al., 2015;

McCord et al., 2009; Nyamtema et al., 2011; Pereira et al., 2007; Zachariah et al., 2009). Other health cadres notably doctors were resistant to an overall scale-up particularly if it jeopardised investments into their own cadre (Dogbey et al., 2016b). The third paper also found that steps have been made to develop a Bachelor of Science program in Clinical Medicine, creating career development opportunities for a cadre that otherwise had limited options. Barriers to scale-up included resistance from medical doctors, who felt that Clinical Officers were not competent enough to handle complicated cases, and a lack of employment opportunities given a surplus of about 3,000 unemployed Clinical Officers in Kenya who could potentially fill in the health workforce gaps (Dogbey et al., 2016b). There was also resistance from policy makers who felt that Clinical Officers had a limited scope of practice and, as such, could not replace a medical doctor. The large surplus of unemployed Clinical Officers in the context of Kenya presents an opportunity for scale-up but requires support including financial resources and prioritization from the government and other key stakeholders.

BRIDGING THE MANUSCRIPTS

There were a number of cross-cutting issues relevant to each of the three chapters, linked to the three levels of analysis of the conceptual framework. Three major cross cutting themes emerge from the research at a macro, meso and micro level which are discussed next. The first cross-cutting theme is the importance of examining the macro-level health system context when discussing issues around HRH exploring solutions to address current shortages and maldistribution. The second cross-cutting theme was around the factors that influence migration of health professionals at a meso-level. The third cross-cutting theme was the maldistribution of health professionals and the scale-up of Clinical Officers in Kenya.

Importance of examining the macro-level health system context

One of the factors that arose from all three papers is the importance of examining the macro-level factors particularly at the health system level. Systems thinking places an emphasis on the overall

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context and the interconnectedness between the various actors and factors in the health system (WHO, 2009). One of the findings from the first paper was that the progress in the context of HRH in Kenya, in particular the development of a comprehensive health policy, HRH policies, the promulgation of a new constitution, and a growing economy are all factors that have influenced the situation for health professionals today compared to 10 to 15 years ago (Dogbey et al., 2016a).

At the time of the release of the 2006 World Health Report, Kenya was considered one of 57 countries facing a critical HRH shortage (WHO, 2006). Ten years later, Kenya still experiences a shortage of health professionals but the context of HRH has improved with regards to strategic planning and policy development. Despite some ups and downs in the socio-political context, Kenya's economy has overall had a positive growth rate and continues to excel within the sub-Saharan context (World Bank, 2016). Discourse on migration of health professionals still tends to focus on the challenge of mass exodus of health professionals from resource constrained source countries to richer destination countries (Connell et al., 2007; Dumont et al., 2008; Tjadens et al., 2012). This research by contrast, suggests that migration is no longer a key priority for Kenya, at least from the perspective of government and development agencies, a factor potentially attributable to the aforementioned policy developments. Health professionals themselves are less sanguine on this point, still expressing dissatisfactions that could incentivize their migration, but arguably less so now than in past years. The extent to which these changes in Kenya are attributable to macro international policy interventions, such as the WHO Global Code of Practice on the International Recruitment of Health Personnel (the WHO Code) passed in 2010 or the Commonwealth Code of Practice for the International Recruitment of Health Workers (the Commonwealth Code) passed in 2003 has yet to be studied, (Buchan, 2010; Dumont et al., 2008), but likely is not extensive, given findings that recruitment agencies were not seen as a factor in Kenyan HRH migration. The WHO Code was passed in 2010 and the data collection for this research was conducted between August 2012 and February 2013 and so it might have been too early to

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assess its impact in the Kenyan context. The dearth of data on migration could also be a factor influencing the downplaying of international migration of health professionals by government informants. Data from the Kenyan Nursing Council, the only health professional body maintaining migrations, however, has shown a sharp decline in requests for verification to migrate since 2003. The Kenyan economy has also grown significantly since the 1990s and what is more, Kenya is much more politically stable.

Despite these developments, the lack of resources in the health system emerged as an impediment to progress on improving the HRH context in Kenya (Dogbey et al., 2016b). The first paper found that health professional representatives were still disgruntled with the overall health system and felt that their voices were not heard (Dogbey et al., 2016a), consistent with similar earlier studies from Kenya (Gross et al., 2011; Mwaniki & Dulo, 2008). This came out even more strongly in the second paper, as health professionals were found to be highly dissatisfied with government efforts with respect to the overall macro-context including taxation, security, expenditure on health and education, and management of the economy (Dogbey et al., 2016).

In the third paper, one of the key emerging factors was the need for health system financing to support scale-up of Clinical Officers and any other health professional cadre (Dogbey et al., 2016b). This is linked to the overall need for investment into the health system outlined in the first paper. While the government was identified as a preferred employer in the first two papers, the third paper found that limited capacity hindered their ability to absorb health professionals who were trained (Dogbey et al., 2016; Dogbey et al., 2016a). Although the study found that there was a surplus of 3,000 Clinical Officers, a lack of health system financing and capacity hindered the governments' ability to harness this potential resource (Dogbey et al., 2016a).

The developments in Kenya's health policy context coupled with global efforts to manage migration of health professionals may not necessarily translate into immediate gains for the local health system. This certainly came across in the survey and interviews of health professionals in the second paper. They nonetheless represent steps in the right direction, particularly in augmenting the stick factors for migration, those factors that promote retention of health professionals at the source country level. Kenya is therefore a potential model for how an improved health policy context for health system strengthening and health service delivery can help to retain health workers, particularly in rural areas.

Factors influencing the migration of health professionals from Kenya

With respect to the factors that influence the migration of health professionals from Kenya the three research papers provided an insight into the push, pull, stick and stay factors, with a particular emphasis on the push and the stick factors at the source country level. Consistent with the literature review, health professionals had high levels of dissatisfaction with the cost of living, government efforts with regards to expenditure on health and education, overall insecurity and poor infrastructure (EQUINET, 2007; Martineau, Decker, & Bundred, 2004; Mwaniki & Dulo, 2008; Tjadens et al., 2012). Dissatisfaction was also expressed with respect to living and working conditions including areas such as lack of infrastructure, work benefits, poor occupational safety. Unique to Kenya was the fact that there was a high level of job security particularly in the government. Investment by the government into the overall health system can and does have an impact on health professional migration decisions in that it discourages out-migration, particularly in cases where working conditions in destination countries are markedly better. In South Africa for example public sector investments have staved off further migration of nurses (R. Labonte et al., 2015).

Another important finding was that dissatisfaction with current living and working conditions did not necessarily translate into out-migration. This is a departure from literature on traditionally construed push factors that are often seen as forcing health professionals out of source countries

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(Anyangwe & Mtonga, 2007; Bundred & Gibbs, 2007; Matsiko & Kiwanuka, 2003; Mbindyo et al., 2009).

In the Kenyan context, stick factors such as family ties, fear of the unknown and complicated migration processes resulted in health professionals not migrating, even though given the opportunity, many would still choose to do so. Moreover, the macro-level investments that the government has made both in the health sector and in the overall economy have transformed the professional context for health professionals in Kenya. This change, coupled with relative economic and political stability as well as other global efforts to manage health professional migration, has resulted a decline in overall migration of health professionals as evidenced by data on nurse migration from the Nursing Council of Kenya. In the case of Clinical Officers there was a high level of dissatisfaction but a low possibility of migration due to the lack of recognition of their credentials in countries other than Kenya. Even where there may be a possibility to migrate to other regional countries, the practice of migration of Clinical Officers was much less common than that of doctors and nurses perhaps given that their salaries in destination countries would not be much more significant than in Kenya. Literature and research on migration of health professionals from lower-income source countries tends to focus on the deplorable conditions that 'push' health professionals out of their countries. This research challenges that perspective and asserts that not all health professionals are eager to abandon their source countries in favour of higher income destination countries.

It is important, that policy makers do not take for granted the fact that dissatisfaction does not translate into migration overall for health professionals. Better data is required to capture both actual and intended migration of health professionals in Kenya beyond data from the Nursing Council of Kenya, so as to quantify and qualify migration of other cadres, such as doctors and Clinical Officers. The table below draws together the findings from the three research papers into a comprehensive list of these factors, across the three organizational levels (macro, meso and micro) that have been used in the overall study.

Table 5.1: Summary of Push, Pull, Stick and Stay Migration Factors at a macro, meso and micro level from Key informants’ vs. Health Professionals’ perspectives

	SOURCE COUNTRY (KENYA)		DESTINATION COUNTRY	
	PUSH (Draw outward migration)		PULL (Draw inward migration)	
	Key informants	Health Professionals	Key informants	Health professionals
MACRO	<ul style="list-style-type: none"> ▪ Lack of immediate impact of high level policy changes to the current context for health professionals ▪ Political turbulence in 2007 and subsequent impact on insecurity and poor policy environment. ▪ Lack of resources particularly in government to absorb trained health professionals 	<ul style="list-style-type: none"> ▪ High and unfair level of taxation ▪ Dissatisfaction with government investments in health, education, environment, economy ▪ Poor efforts to mitigate violence ▪ Overall poor public infrastructure 		
MESO	<ul style="list-style-type: none"> ▪ Poor infrastructure - both in the hospitals and in the rural/remote towns ▪ Shortages of health professionals increasing workload ▪ Maldistribution of health professionals ▪ Persistent poor working conditions for other health professionals especially nurses and Clinical Officers ▪ Poor working environment 	<ul style="list-style-type: none"> ▪ Lack of infrastructure at work ▪ Lack of medical supplies ▪ Poor work benefits ▪ Shortages of health professionals leading to high workload and poor morale ▪ Dissatisfaction with occupational safety ▪ Lack of respect from government and management 	<ul style="list-style-type: none"> ▪ Perception of better working conditions in destination countries ▪ Perception of better living conditions in destination countries 	<ul style="list-style-type: none"> ▪ Migration potential of the cadre (nurses) ▪ International opportunities (for nurses) ▪ Higher quality of life ▪ Professional development opportunities
MICRO	<ul style="list-style-type: none"> ▪ Inability to find suitable schools for children ▪ Lack of career development opportunities 	<ul style="list-style-type: none"> ▪ Dissatisfaction with income: current vs ideal or other professionals ▪ Lack of work-related travel opportunities ▪ Workload ▪ Lack of personal safety especially for nurses ▪ Ability to find good housing ▪ Cost of education for children ▪ Poor access to medical services for family ▪ Future of children in Kenya 	<ul style="list-style-type: none"> ▪ Better education, living and working conditions for health professionals and their families 	

	SOURCE COUNTRY (KENYA)		DESTINATION COUNTRY	
	STICK (Encourage retention/deter migration)		STAY (Discourage return after migration)	
	Key Informants	Health Professionals	Key informants	Health professionals
MACRO	<ul style="list-style-type: none"> ▪ Improvements to the overall health policy context in Kenya with leadership from government ▪ Development of a new health policy (2012) and HRH strategic plans in 2009 and 2014 respectively ▪ Future planning for HRH needs beyond current shortages. 			
MESO	<ul style="list-style-type: none"> ▪ Improved working conditions especially for doctors in terms of remuneration in the government ▪ Allowances e.g. hardship and housing allowance ▪ Improved career development opportunities e.g. BSc program for Clinical Officers ▪ Increase in training institutions for health professionals 	<ul style="list-style-type: none"> ▪ Retention schemes ▪ Incentives for health workers such as housing allowances ▪ Sense of patriotism and obligation to population as a health professional 		<ul style="list-style-type: none"> ▪ Possibility of gaining permanent residence ▪ Possibility of gaining citizenship ▪ Better salaries
MICRO	<ul style="list-style-type: none"> ▪ Family Ties ▪ Job security in government ▪ Lack of marketability in destination countries in the case of Clinical Officers 	<ul style="list-style-type: none"> ▪ Strong family and kinship ties ▪ Intellectual stimulation from job ▪ Ability to help others through the career especially for nurses ▪ Job security ▪ Unwilling to sell house, property, remove savings or investments ▪ Unwilling to give up Kenyan citizenship ▪ Barriers to migration – lack of professional recognition ▪ Unwilling to retire nor be buried in destination country 		<ul style="list-style-type: none"> ▪ Citizenship in destination country ▪ Permanent residence in destination country

Maldistribution of health professionals and scale-up of Clinical Officers

Finally, a key emerging theme from the three papers is the significance of the persisting maldistribution of health professionals. The first paper identified a challenge that is not unique to Kenya: most of the health professionals are located in urban areas. The second paper further confirmed the unwillingness of these health professionals to work in rural areas, and their preference for urban areas. A ray of hope was presented in the third paper in the cadre of Clinical Officers whose training in rural areas often means that they come from the communities in which they train and ultimately serve. The WHO affirms that training in rural areas is a factor in retention of health professionals in rural and remote areas (WHO, 2010a). A key potential lies in addressing the issue of maldistribution of health professionals by scaling up Clinical Officers particularly in the rural areas in Kenya. This cannot be done without other investments into the health system such as infrastructure, medical supplies and non-health system related investments such as housing and education for their families. A multi-prong approach is therefore necessary in order to resolve the complex issues of maldistribution. Such an approach would require a systems thinking perspective that takes into account the need for financing and resources specifically targeting the hiring of clinical officers into the public health system. Given that a surplus of 3000 Clinical Officers exists, a policy shift is required so that the Kenyan health system is less physician centered and more dependent on mid-level providers. The necessary governance structures would also be required so as to ensure that there is a paradigm shift rather than a knee-jerk reaction to the shortages of health professionals. To ensure this, longer term advocacy and policy influencing roles would need to be envisioned for Clinical Officers including a clear niche for their representation to government.

The first paper identified the gaps in service delivery and the reality of the shortages congruent with the literature on the same. The second paper highlighted the specific factors that lead to frustration among health professionals with regards to their living and working conditions, factors that

often predispose them to work in urban areas so as to limit or reduce the level of dissatisfaction. The overall impact of this maldistribution on the population of Kenyans has dire impacts with regards to health outcomes. The lack of skilled birth attendants, for example, results in high levels of inequity between rural and urban populations, and between the top 20th percentile and the bottom 20th percentile by income (WHO, 2011).

The mid-level cadre of Clinical Officers presents a promising solution to addressing the maldistribution of health professionals in Kenya and in other similar contexts such as Zambia, Malawi, Uganda, Tanzania and South Africa (Bradley & McAuliffe, 2009; Buwembo W et al., 2014; Chilopora et al., 2007; Doherty J et al., 2013; Ellard D et al., 2012).

To date, more efforts have been made to improve working conditions for doctors and to some extent for nurses than for Clinical Officers in Kenya. The challenge with the current investments on doctors and nurses is that they are mostly located in urban areas and worse still, are more likely to migrate. The low likelihood of Clinical Officers migrating presents an opportunity for governments to invest in this cadre whose skills will be retained not only within the source country, but also in rural areas given their training in that environment. Investment into other health professional cadres such as doctors and nurses need not be mutually exclusive to a concerted investment into Clinical Officers.

It is important to note that Clinical Officers are not a magic bullet solution to the HRH crisis. As noted by key informants and health professionals, a concerted, holistic, system-wide approach to human resource planning is required to ensure that the right skill mix and numbers are not only trained but employed. As per the systems thinking approach that guided this thesis, there is a need for recognition of the unique factors in the local context at multiple levels – macro, meso and micro.

POPULATION AND PUBLIC HEALTH IMPLICATIONS

The findings from this thesis present a number of implications for population and public health. The contribution of this research to the field of population health is that it allows for an analysis of HRH that goes beyond addressing individual factors to explore the impact of shortages, maldistribution, and internal and international migration on health service delivery, with implicit impacts on health outcomes. The conceptual framework developed from this dissertation is a key contribution to the understanding and analysis of migration of health professionals both within and between source and destination countries. Despite the knowledge that HRH issues are paramount and that there is a global crisis, international efforts continue to emphasize destination-country centric solutions such as the WHO Global Code of on International Recruitment of Health Personnel, generally ignoring the efforts by source countries to improve on their domestic context by reducing push factors. This research contributes a new perspective that outlines the efforts at a source country level in addressing HRH shortages and further explores promising solutions could address the current challenges faced.

A second implication for population and public health is the mid-level cadre that forms the Kenyan case-study example in this thesis. While this cadre has existed since the early 1900s, the role of Clinical Officers is gaining more significance in today's context of maldistribution and health professional shortages. My thesis contributes an evidence base for decision making around scaling up this cadre by providing an analysis of the strengths, weaknesses, opportunities and threats. A successful scale-up of Clinical Officers would have a positive impact on the population in Kenya in that that there would be more skilled birth attendants and health service providers for the rural and vulnerable populations. Such investments have the potential to alter the life course population health outcomes for an entire generation by reducing and ultimately eliminating preventable maternal, neonatal and child deaths in Kenya, with transferable implication for similar contexts in sub-Saharan Africa, Latin America and Asia.

Finally with regards to migration discourse, this thesis contributes new questions that explore the issue of 'stick' factors. Most of the literature explores factors that draw health professionals towards destination countries (pull factors) or compel health professionals to leave source countries (push factors). This thesis fills a gap in knowledge by exploring the stick factors that keep and maintain health professionals in source countries. These stick factors and the conceptual framework on migration factors create a space for the generation of knowledge and research that is relevant for policy makers in source countries. Rather than focus on the needs of destination countries over the potential migration of skilled workers this research focuses on potential solutions that could be useful within source countries both to mitigate migration and to overcome shortages. Some of these factors probably manifest as 'stuck' factors, where health professionals would like to leave but are unable to either due to arduous migration processes. Beyond this, the stick factors present a unique opportunity for policy makers and health managers to harness the HRH available by encouraging them to stay in the source countries. Many health professionals are committed to the work that they do and derive great satisfaction in serving the general population. This goodwill needs to be supported at the multiple levels – macro, meso and micro – so as to ensure that working conditions are suitable for health professionals, allowing them to provide high quality service to the general population.

STRENGTHS, LIMITATIONS AND AREAS FOR FUTURE RESEARCH

Strengths

One of the main strengths of this thesis is that it provides a detailed contextualized portrait of HRH in Kenya and presents a case-study that can be used as a learning experience for similar countries facing shortages. This thesis also acknowledged that health systems are complex and multifaceted, and as such adopted a systems thinking approach when examining the factors influencing health professional migration.

Chapter 5: General discussion and Conclusion

The conceptual framework developed for this study provides a framework for analyzing push, pull, stick and stay factors in both source and destination countries at different social levels. This thesis debunks myths related to migration of health professionals by providing new insights about how and why not all health professionals would choose to migrate, even when expressing dissatisfaction with their current living and working conditions.

Finally this thesis includes a case-study of Clinical Officers in Kenya exploring what it would take to scale-up this cadre, with the goal of addressing the persistent problem of maldistribution and shortages of HRH. Access to health care and health service providers is one of the social determinants of health and is a key factor in improving the overall health of the population. By exploring the mid-level cadre of Clinical Officers, this thesis elucidates the barriers and facilitators to scaling up such a cadre presenting policy makers with an evidence base for decision making.

Limitations

There are limitations to the research that has been presented in this thesis both in terms of the methods used and the timing of the data collection.

Timing of the research

One of the limitations of the thesis is that the data was collected between August 2012 and February 2013. Following the March 2013 general elections, Kenya implemented a devolved government so that 8 provinces were replaced by 47 counties. Under the previous governance system, health professionals were centrally managed through the two ministries of health – the Ministry of Medical Services and the Ministry of Public Health and Sanitation. Since March of 2013, the 47 counties became responsible for their own hiring, attraction and retention of health professionals. It would be interesting to explore health professionals' perspectives on their living and working conditions under the county-system. It would also be worth exploring the new role of the central government versus the county governments, and how they work together (or do not) to address HRH issues in Kenya's context.

Methodology

Another limitation of the research was the sample size for the health professional survey. Despite my best efforts to contact the respective registration bodies for the health professionals, I was unable to gain access to email addresses of health professionals so as to share the survey electronically. As such I was limited to the promoting the survey through unofficial Facebook groups of the health professionals. The format of the survey may also have influenced the low response rate. The survey was developed using the desktop version of SnapSurvey on the assumption that most respondents would complete the survey on a computer. The reality was that most respondents access the internet through their mobile phones. Having this knowledge beforehand would have influenced the design of the survey both in terms of length and format so as to maximise the response rate.

Finally, there are some important aspects of HRH migration that the thesis hints at, but does not explore. This includes the gendered dimensions of HRH, both in planning and deployment within the country, in how working and living conditions are perceived, and whether there are marked gendered differences in migration intent.

Areas for Future Research

There are a number of potential areas for future research that this thesis was not able to cover. At a macro-level, an overall gender analysis of the impact of the policy changes and the changes in the context of HRH in Kenya would also be worth exploring. At the meso-level, the nursing profession is traditionally female dominated and while doctors are fairly gender balanced, Clinical Officers are male-dominated. Research questions could examine the influence of gender on health professional choice of career path as well as perceptions of living and working conditions particularly for the different cadres. Finally at the micro level migration considerations and the impact of spouses on migration decisions based on gender and profession would be an area worth exploring in future research.

Chapter 5: General discussion and Conclusion

Another research area worth exploring would be the pull and stay factors particularly for Kenyan health professionals who are currently in destination countries. Such a study would examine the factors that encouraged the health professionals to leave and those that have deterred them from returning to Kenya. In a similar vein, anecdotally, there has been an increase in the number of Kenyans returning from the diaspora to settle back in Kenya. It would be worth exploring the return factors as well as the factors around circular migration, whether the return to Kenya is considered permanent or not and the upstream factors influencing such a return. It would also be worth exploring whether these health professionals practice in rural or remote areas or whether they are mostly located in urban areas and the overall impact of their return on the health system both in terms of public versus private service delivery.

From this research, it emerged that recruitment agencies did not play a significant role in influencing migration decisions of health professionals. It also emerged that migration is not considered to be a priority area for policy and decision makers in the health system. Further research questions could examine the role of instruments such as the WHO Code and the Commonwealth code in deterring migration of health professionals from Kenya. Research could also be conducted to explore the level of awareness among key stakeholders of the two codes and how this has influenced or not influenced the current efforts to manage migration of health professionals.

Finally more concrete data is required on the scope of migration of health professionals from Kenya particularly for other cadres beyond nurses so as to truly capture the current state of migration of health professionals beyond anecdotal evidence and denial from policy makers of its significance. This research fills a gap in the knowledge of migration perspectives of key informants and health professionals. Regular monitoring is required to capture the scope of migration.

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Chapter 6: Dissemination efforts

A number of dissemination efforts have been conducted during the course of this research with the goal of promoting the knowledge transfer and exchange of the findings from the thesis. The three manuscripts will be submitted into peer-reviewed journals in the coming months.

Conference presentations

Canadian Conference on Global Health – poster presentation

Dogbey, B., Bourgeault, I.L.; Labonte, R. (2015). Promising solutions to migration of health professionals: Clinical Officers in the context of Kenya. Canadian Conference on Global Health Nov 5-7 2015, Montreal QC

Canadian Sociological Association Congress – oral presentation

Dogbey, B; Bourgeault, I; Labonte, R. (2015). Migration Perspectives of Doctors, Nurses and Clinical Officers from Kenya. Canadian Sociological Association Congress 2015. Ottawa ON. June 3rd 2015.

Canadian Association for Health Services and Policy Research Conference – poster presentation

Dogbey, B.; Bourgeault, I; Labonte, R. (2015). New developments in the policy context of migration of health professionals from Kenya. Canadian Association for Health Services and Policy Research Conference. Montreal, QC. May 25-28, 2015.

Other

Africa Portal – blog post

Dogbey, B. (2013). New Constitution, New Hope for Health Professionals in Kenya. Africa Portal Opinion Piece. Available <http://www.africaportal.org/blogs/community-practice/new-constitution-new-hope-health-professionals-kenya>.

APPENDICES

APPENDIX A: ETHICS APPROVAL FROM THE UNIVERSITY OF OTTAWA

File Number: H 06-11-06

Date (mm/dd/yyyy): 08/08/2012



Université d'Ottawa **University of Ottawa**
 Bureau d'éthique et d'intégrité de la recherche Office of Research Ethics and Integrity

Ethics Approval Notice**Health Sciences and Science REB****Principal Investigator / Supervisor / Co-investigator(s) / Student(s)**

<u>First Name</u>	<u>Last Name</u>	<u>Affiliation</u>	<u>Role</u>
Ivy	Bourgeault	Health Sciences / Others	Supervisor
Brenda Adhiambo	Dogbey	Others / Others	Student Researcher

File Number: H 06-11-06**Type of Project:** PhD Thesis**Title:** "Source" Country Perspectives on the Migration of Health Professionals: Push, Pull, Stick and Stay Factors in Kenya

Approval Date (mm/dd/yyyy)	Expiry Date (mm/dd/yyyy)	Approval Type
08/08/2012	07/08/2013	Ia

(Ia: Approval, Ib: Approval for initial stage only)

Special Conditions / Comments:

N/A



Université d'Ottawa
Bureau d'éthique et d'intégrité de la recherche

University of Ottawa
Office of Research Ethics and Integrity

This is to confirm that the University of Ottawa Research Ethics Board identified above, which operates in accordance with the Tri-Council Policy Statement and other applicable laws and regulations in Ontario, has examined and approved the application for ethical approval for the above named research project as of the Ethics Approval Date indicated for the period above and subject to the conditions listed the section above entitled "Special Conditions / Comments".

During the course of the study the protocol may not be modified without prior written approval from the REB except when necessary to remove subjects from immediate endangerment or when the modification(s) pertain to only administrative or logistical components of the study (e.g. change of telephone number). Investigators must also promptly alert the REB of any changes which increase the risk to participant(s), any changes which considerably affect the conduct of the project, all unanticipated and harmful events that occur, and new information that may negatively affect the conduct of the project and safety of the participant(s). Modifications to the project, information/consent documentation, and/or recruitment documentation, should be submitted to this office for approval using the "Modification to research project" form available at:
<http://www.research.uottawa.ca/ethics/forms.html>

Please submit an annual status report to the Protocol Officer 4 weeks before the above-referenced expiry date to either close the file or request a renewal of ethics approval. This document can be found at:
<http://www.research.uottawa.ca/ethics/forms.html>

If you have any questions, please do not hesitate to contact the Ethics Office at extension 5387 or by e-mail at:
ethics@uOttawa.ca.



Germain Zongo
Protocol Officer for Ethics in Research
For Dr. Daniel Lagarec, Chair of the Health Sciences and Sciences REB

APPENDIX B: ETHICS APPROVAL FROM GREAT LAKES UNIVERSITY OF KISUMU



GREAT LAKES UNIVERSITY OF KISUMU (GLUK)

P. O. Box: 2224-40100 KISUMU, Tel: 254-057-2023972,
Cell Phone 0736 550505

Email: academics@richinafrica.org

**Certificate of Approval of Research Protocol
GLUK Research Ethics Committee (GERC)
Ref: No. GREC 085/31/2012**

To: Brenda Adhiambo Dogbey (Principal Investigator)

Date: Tuesday, July 31, 2012

STUDY TITLE: SOURCE COUNTRY PERSPECTIVE ON THE MIGRATION OF HEALTH PROFESSIONALS: PUSH, PULL, STICK AND STAY FACTORS IN KENYA

This is to inform you that an expedited review of your study proposal was done in our GREC meeting of Monday, July 23, 2012. Our assessment of the study proposal for scientific validity, justification, relevance of purpose and assurance on the necessary ethical considerations grants you an unconditional approval.

This approval takes positive cognizance of the determination of the HS & SREB [Ref. HO6 – 11 – 6] of December 14, 2011. Should there be need to continue with the investigation upon the expiry of the study period, ensure you apply for re-assessment which also attends to any adjustments or amendments whatsoever that may accrue in the course of the study.

Note – always quote the GREC reference in future correspondence and that all applications / re-submissions should reach the GREC Secretary two weeks before the next scheduled meeting.



Rev. Boniface Obondi

SECRETARY, GREC

APPENDIX C: RESEARCH APPROVAL LETTER – MINISTRY OF MEDICAL SERVICES



MINISTRY OF MEDICAL SERVICES
OFFICE OF DIRECTOR OF MEDICAL SERVICES

Telegrams: "MINHEALTH". Nairobi
Telephone; Nairobi 2717077 Fax: 2715239

OFFICE OF DIRECTOR OF
MEDICAL SERVICES
AFYA HOUSE
CATHEDRAL ROAD
P.O. BOX 30016
NAIROBI

MMS/ADM/3/8/VOL.111

15th August, 2012

Brenda Adhiambo Dogbey
PhD Candidate
Institute of Population Health
University of Ottawa, ON KIN6N5,
CANADA.

Dear Ms Brenda,

RE: AUTHORITY TO CONDUCT RESEARCH

Your request for permission to conduct research in Kenya dated 13th August, 2012 refers.


The title of your study is *"Source Country Perspectives on the Migration of Health Professionals: Push, Pull, Stick and Stay Factors and Policy Options in Kenya"*.

Authority is hereby granted to conduct the said research and you are expected to notify this office of your research findings.



Dr. Susan M. Magada
FOR: DIRECTOR OF MEDICAL SERVICES

APPENDIX D: RESEARCH APPROVAL LETTER – UNIVERSITY OF NAIROBI



UNIVERSITY OF NAIROBI
OFFICE OF THE DEPUTY VICE - CHANCELLOR
(Research, Production & Extension)
Prof. Lucy W. Irungu B.Sc., M.Sc., Ph.D.

P.O. Box 30197-GPO,
00100, Nairobi-Kenya
Telephone: +254-20-2315416 (DI), 318262

Fax: 0202317251
Email: dvrpe@uonbi.ac.ke

UON/RPE/1/12 September 7, 2012

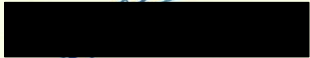
Brenda Adhiambo Dogbey,
PhD Candidate, Population Health,
University of Ottawa

Dear Odhiambo,

PERMISSION TO CONDUCT RESEARCH AT THE COLLEGE OF HEALTH SCIENCES, UNIVERSITY OF NAIROBI

I refer to your letter dated August 21, 2012 on the above subject. This is to inform you that the Vice-Chancellor has granted you permission to interview staff in the relevant Departments and students at the College of Health sciences, University of Nairobi to enable you collect data for your PhD degree thesis at the University of Ottawa, Canada entitled "Source Country Perspectives on the Migration of Health Professionals: Push, Pull, Stick, Stay factors and Policy Options in Kenya".


I wish you a fruitful research.



LUCY W. IRUNGU
DEPUTY VICE-CHANCELLOR
(RESEARCH, PRODUCTION AND EXTENSION)
&
PROFESSOR OF ENTOMOLOGY

c.c. Vice-Chancellor
DVC, (A&F)
DVC, (AA)
DVC, (SA)
Principal, CHS

BW/no

 ISO 9001:2008 CERTIFIED

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APPENDIX E: ONLINE SURVEY INSTRUMENT

Source Country Perspectives on the Migration of Health Professionals from Kenya

Thank you so much for your time. Please kindly read ALL questions carefully. Please answer questions by marking the appropriate spaces. Ethics approval for this study has been obtained from the University of Ottawa (CANADA) and the Great Lakes University of Kisumu (KENYA) and permission has been obtained from the Ministry of Medical Services through the Office of the Director of Medical Services. Please remember that all your answers will be treated as strictly CONFIDENTIAL. Participation in the survey is strictly VOLUNTARY. You may choose to indicate your contact information at the end of the survey to participate in a follow-up interview (optional). You may contact the principal investigator Brenda Dogbey via email [REDACTED] or Twitter [REDACTED]

1. I understand that participation in this survey is STRICTLY VOLUNTARY and I CONSENT to participating. If you agree, please select "YES" and proceed with the survey.
- YES
 - NO

2. What is your highest level of professional education?
- 1-2 year certificate or diploma
 - 3-4 year certificate or diploma
 - 4-5 year undergraduate degree
 - Post graduate degree
- Other (please specify)
-
-
-

3. Which of the following BEST describes your health professional category?
- Doctor (generalist)
 - Doctor (specialist)
 - Nurse (enrolled)
 - Nurse (Registered)
 - Clinical Officer
 - Pharmacist
 - Dentist
- Other (Please specify)
-
-
-

4. In what year did you start working in your profession? (e.g. 1999, 2000)

5. Why did you enter into your profession? Please respond to each by ranking the reasons from VERY IMPORTANT to NOT IMPORTANT AT ALL

	VERY IMPORTANT	SOMEWHAT IMPORTANT	NOT IMPORTANT AT ALL
Intellectual stimulation/challenge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Earning potential	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Research opportunity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Teaching opportunity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Influence of a mentor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Influence of my family	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Influence of my friends	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
International opportunities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ability to migrate to another country	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ability to work in another country	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Social status	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ability to help other people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Please indicate how SATISFIED OR DISSATISFIED you're with the following in your current health professional job:

	VERY SATISFIED	SATISFIED	NEUTRAL	DISSATISFI ED	VERY DISSATISFI ED	NOT APPLICAB LE
Opportunities for further education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Prospects for professional/career advancement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Job security at your workplace	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Respect for colleagues with whom you work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Respect from management to whom you report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Respect from patients	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Respect from government	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Respect for your professional from society/your community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How women are treated in the workplace in Kenya	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How certain ethnic groups are treated in the workplace	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. Did you undertake any of your training abroad?

- YES
- NO

If "YES" Please list the country or countries of your educational training, duration and year completed (e.g. UK, MPH, 2 years, 2004; India, PhD, 5 Years, 2010)

8. How was your undergraduate/first post-secondary diploma financed? (Please check ALL that apply)

- Personal and/or family resources*
 - Local government sponsorship*
 - Foreign government sponsorship*
 - Non-government sponsorship, loan or grant*
 - University teaching or research fellowship*
- Other (please specify)*

9. Would you feel that it would be JUSTIFIED or UNJUSTIFIED if the government were to require all health professionals trained in Kenya to:

	<i>JUSTIFIED</i>	<i>NEITHER</i>	<i>UNJUSTIFIED</i>
Do some form of national service for a specified amount of time upon completion of their education?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Work in a rural or underdeveloped area for a specified amount of time upon completion of their education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Complete some form of national service if they received government bursaries or public education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Work in rural or underdeveloped area for a specified amount of time if they received government bursaries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10. If you answered "JUSTIFIED" for any of the above, for how long should they require the national service?

- Less than 1 year*
 - 1 year*
 - 2 years*
 - 3 years*
- Other (Please specify)*

11. Are you currently employed?

- YES*
- NO*

If "YES" , for how many months, years?

12. Have you been unemployed in the last five years?

- YES
- NO

If "YES", for how many months, years?

13. Which ONE of the following sectors BEST describes your current or most recent employment

- Public/Government - Academic
- Public/Government - Non-academic
- Public/Government - Administrative/Managerial
- Private, For Profit - Academic
- Private, For Profit - Non-academic
- Private, For Profit - Administrative/Managerial
- Non-profit/NGO - Academic
- Non-profit/NGO - Non-academic
- Non-profit/NGO - Administrative/Managerial

14. Please indicate how SATISFIED or DISSATISFIED you are with your current health professional job

	VERY SATISFIED	SATISFIED	NEUTRAL	DISSATISFI ED	VERY DISSATISFI ED	NOT APPLICAB LE
Your income compared to other professionals in Kenya	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your income compared to what is needed for a good quality of life in Kenya	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your income compared to what you would like to earn	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Work benefits (e.g. health insurance, pension...)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your work load	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Opportunity to travel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Infrastructure (facilities, and equipment at work)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Medical supplies available to do your job	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Morale in the workplace	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Occupational safety in the workplace (risk of contracting illness)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Personal security in the workplace	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

15. Do you work PART-TIME in another sector apart from your CURRENT JOB? Please check ALL that apply.

- Public/Government - Academic
- Public/Government - Non-academic
- Public/Government - Administrative/Managerial
- Private, For Profit - Academic

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- Private, For Profit - Non-academic*
 - Private, For Profit - Administrative/Managerial*
 - Non-profit/NGO - Academic*
 - Non-profit/NGO - Non-academic*
 - Non-profit/NGO - Administrative/Managerial*
- Other (please specify)*
-
-
-

16. If you DO NOT work for the public/government sector, would you consider working PART-TIME in the following:

	YES	NO	POSSIBLY
Rural public sector?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Urban public sector?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

17. What would influence your decision to work in the public/government sector?

Most important influence _____

Second most important influence _____

Third most important influence _____

18. If you had a choice, where in Kenya would you prefer to work?

- Capital city (Nairobi)*
- Large city*
- Large town*
- Small town*
- Rural area*

19. In your opinion, how problematic is the issue of migration of health professionals?

	VERY PROBLEMATIC	SOMEWHAT PROBLEMATIC	UNPROBLEMATI C	NOT APPLICABLE
From rural to urban areas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
From public to private health care facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
From public health facilities to NGOs (non-clinical)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
From private health facilities to NGOs (non-clinical)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
From Kenya to other countries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

20. Please indicate how SATISFIED or DISSATISFIED you are with the current issues which relate to your CURRENT LIVING CONDITIONS

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	VERY SATISFIED	SATISFIED	NEUTRAL	VERY DISSATISFIE D	NOT APPLICABLE
Cost of living in Kenya	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ability to find the job you want in your profession	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ability to find the house/housing you want to live in	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of affordable quality products	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ability to find a good school for your child/children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ability to find medical services for your family/children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A fair level taxation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your personal safety	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your family's safety	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The future of your children in Kenya	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quality/upkeep of public infrastructure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How women are treated in general in Kenya compared to men	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How certain ethnic groups are treated in Kenya	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

21. What is your level of satisfaction with how the GOVERNMENT is managing Kenya:

	VERY SATISFIED	SATISFIED	NEUTRAL	VERY DISSATISFIE D	NOT APPLICABLE
Government efforts to mitigate violence in general	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Government efforts to mitigate gender inequity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Government efforts to mitigate ethnic inequity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Government expenditure and management of health services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Government expenditure and management of education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Government expenditure and management of social welfare services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Government expenditure and management of the environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Government expenditure and management of the economy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

22. How much consideration have you given to moving to another country to live and work?

- A great deal*
- Some consideration*
- None at all*

23. How often do you seek information about job opportunities in other countries from the following sources:

OFTEN ONCE IN A WHILE SELDOM NEVER

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Professional journals (including online journals)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Newspapers/newspaper websites	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Friends and/or colleagues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Family	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Recruitment websites	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

24. How often have you been contacted by the following?

	<i>OFTEN</i>	<i>ONCE IN A WHILE</i>	<i>SELDOM</i>	<i>NEVER</i>
Recruitment agency based in Kenya to work ABROAD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Recruitment agency based ABROAD to work ABROAD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Colleague/Friend based outside of Kenya to work ABROAD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

25. How significant have recruitment agencies been in influencing your decision to leave Kenya?

	<i>VERY SIGNIFICANT</i>	<i>MODERATELY SIGNIFICANT</i>	<i>SLIGHTLY SIGNIFICANT</i>	<i>NO ROLE AT ALL</i>	<i>NOT LEAVING KENYA</i>
Influence of recruitment agencies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

26. How likely or unlikely is it that you will move from Kenya?

	<i>VERY LIKELY</i>	<i>SOMEWHAT LIKELY</i>	<i>VERY UNLIKELY</i>	<i>DON'T KNOW</i>
In the next six months?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the next two years?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the next five years	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

27. If you were to leave Kenya, to which country would you most likely move?

28. If you moved to another country, for how long would you intend to stay?

- Less than 6 months*
- 6 months to 1 year*
- 1 year to 2 years*
- 2 years to 5 years*
- More than 5 years*
- Don't know*
- Not leaving Kenya*

29. Have you applied for any of the following in another country?

	<i>YES</i>	<i>NO</i>	<i>IN THE PROCESS</i>	<i>NOT LEAVING KENYA</i>
Work permit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Permanent residence permit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Citizenship	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Registration with professional body	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

30. If you moved to another country, would you consider any of the following?

	YES	NO	DON'T KNOW
Becoming a permanent resident of that country	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Becoming a citizen of that country	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Retiring in that country	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Being buried in that country	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

31. If you moved to another country, how willing or unwilling would you be to:

	WILLING	UNWILLING	NOT APPLICABLE
Sell your house in Kenya	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sell your property in Kenya	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Take all your savings out of Kenya	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Take all your investments out of Kenya	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Give up citizenship in Kenya	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

32. Have you ever worked for an international organization in Kenya?

- YES
- NO

If "YES" how long did you work for them?

33. Have you ever worked as a member of your health profession in ANOTHER COUNTRY?

- YES
- NO

If "YES" where did you work and in what profession? For how long? (e.g. Ethiopia, Nurse, 5years; UK, Nurse practitioner, 6 years...)

34. While abroad, did you have the same health professional standing as in Kenya? Please explain.

35. Have you ever worked as a non-health professional in another country?

- YES
- NO

If "YES" where did you work, in what profession and for how long? (e.g. Saudi Arabia, Nurse aide, 2 years; UK, Taxi driver, 1 year)

36. If you have worked in another country (either as a health professional or non-health professional) , after how long did you return?

- Did not work in another country
- less than 6 months
- 6 months to 1 year
- 1 year to 2 years
- 2 years to 5 years
- More than 5 years

37. In your opinion was it a good decision to return?

- YES
- NO

38. Have you experienced problems upon your return?

- YES
- NO

If "Yes" please elaborate on the problems you have experienced

39. Do you consider your return permanent?

- YES
- NO

40. How long are you planning on staying in Kenya?

41. Has the new constitution influence your decision to remain/leave Kenya

- YES
- NO

If "YES" please explain how

42. What is your gender?

- Male
- Female

43. What is your age?

44. What is your residential status in Kenya

- Citizen
- Permanent Resident
- Temporary Resident
- Dual Citizen

If Dual Citizen Please specify countries where citizenship is held

Other (Please specify)

45. What is your marital status?

- Married
- Living together/Co-habiting
- Committed relationship (not living together)
- Single
- Divorced
- Widowed
- Separated

46. Is your partner/spouse currently employed?

- YES
- NO

If YES, in what profession?

47. Do you have any children?

- YES
- NO

48. If you answered YES, how many children do you have:

Under 6 years old (specify number)

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Between 6 years and 18 years (specify number)

Over 18 years old (specify the number)

49. What is your GROSS MONTHLY HOUSEHOLD income

- Below KSh. 10,000
- KSh. 10,000 - KSh. 19,999
- KSh. 20,000 - KSh. 29,999
- KSh. 30,000 - KSh. 39,999
- KSh. 40,000 - KSh. 49,999
- KSh. 50,000 - KSh. 59,999
- KSh. 60,000 - KSh. 69,999
- KSh. 70,000 - KSh. 79,999
- KSh. 80,000 - KSh. 89,999
- KSh. 90,000 - KSh. 99,999
- KSh. 100,000 and above

50. What is your ethnicity? What ethnic group are you from?

51. Do you support any family members other than your immediate family?

- YES
- NO

If YES, how many members do you support

52. Do you have any immediate family members living abroad?

- YES
- NO

If YES, which members? (e.g. mother, brother, sister, father...)

53. Where were you born?

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- Capital city (Nairobi)*
- Large city*
- Large town*
- Small town*
- Rural area*

54. Where do you currently live?

- Capital city (Nairobi)*
- Large city*
- Large town*
- Small town*
- Rural area*

THANK YOU FOR YOUR PARTICIPATION IN THIS SURVEY! YOUR TIME AND ENERGY IS HIGHLY APPRECIATED. Please let me know if I may contact you for a follow-up in-person in-depth interview by filling out the next question. PLEASE DO NOT FORGET TO CLICK SUBMIT WHEN YOU HAVE FINISHED

55. May I contact you for a follow-up in-person interview?

- YES*
- NO*

THANK YOU FOR YOUR TIME! PLEASE CLICK SUBMIT!

APPENDIX F: KEY INFORMANT IN-DEPTH INTERVIEW GUIDE

Source Country Perspectives on the Migration of Health Professionals: Push Pull Stick and Stay Factors and Policy Options in Kenya

Key Informant Interview Guide - Combined

1. General Questions

I would like to begin with you describing your role with respect to managing human resources for health (HRH) in Kenya.

2. STAKEHOLDER-SPECIFIC QUESTIONS

a. For Government/Ministry Representatives

[What are the roles of different government departments/ministries and different levels of government with respect to the migration of health workers into and out of Kenya?]*

How salient or important is this issue for these different departments/ministries?

What are some of the policies/programs that have been tried or are of interest to different government departments to address this issue?

MACRO	Bilateral agreements? Multilateral agreements? International partnerships? International recruitment codes?
MESO	Promoting return migration? Promoting in migration (from neighboring countries, Cuba, etc.); or policies restricting in migration out of concern for HRH depletions in neighboring countries (e.g. within East Africa, to Southern Africa)
MICRO	Governmental incentives, programs/policies e.g. mandatory service requirements; rural service requirements or incentives; policies around wages and working conditions; regarding housing and/or other social programs?

[What other stakeholders are contacted/involved in regards to these initiatives – locally and internationally? In terms of improving health equity for people in Kenya, what other policy ideas would you recommend?]*

b. For Recruiters/Recruitment Agencies

Describe a typical recruitment case.

Do recruiters contact potential migrants directly or are you contacted by potential migrants –

At what point would a health care worker seek out a recruiter?

How do recruiters find potential clients?

How do recruiters intersect with potential employers?

Do recruiters work directly for particular institutions seeking employees or training institutions seeking students?

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What are some of the issues that are raised in the recruitment of high level recruits, e.g. doctors, professors, researchers, nurses?

Who is mostly seeking to migrate?

Prompt: what health profession, what gender, from what region in Kenya

Do you participate in any return migration processes? What about recruitment to Kenya?

Where from? Why? How often? How many? For whom?

c. For those in Education/Training Institutions

Do you collect statistics on the number of students/faculty that leave Kenya? If so, what are they?

Is the migration of health workers considered problematic in your institution - why or why not?

[What portion of the total cost of training of health workers would you say is private, and what portion is public? What data do you have on the total costs of training nurses, doctors, etc.]*

What would you say is the role of your education/training institution with respect to the training of health workers - is this primarily seen to be for domestic or for overseas positions? Please describe some indicators of this?

Do migration options and requirements form part of training? Are international exams easily available/the norm for new graduates?

What is the situation for faculty/researchers?

e.g., who leave for advanced training – incentives to return, etc., does this vary for men versus women?

What are some of the policies/programs that have been tried or are of interest to address the issue of the migration of new graduates? Highly skilled faculty/researchers? Return migration?

d. For Hospitals/Employers

Where does the funding for your organization primarily come from? Public? Private?

What would you say is the HRH situation in your hospital/agency? How does that compare with other hospitals/agencies?

Are local hospitals/agencies experiencing shortages? In which areas?

If there are shortages, how are these influenced by migration?

Have many present members of hospital staff worked outside of Kenya?

By discipline? By gender?

Have many present members of hospital staffs been trained outside of Kenya?

By country of training and discipline? By gender?

How has the migration of health workers affected your hospital/agency?

Return and in-migration, and outmigration

What are some of the challenges you face with each of these flows?

What are some of the policies/programs that have been tried or are of interest to address this issue?

How costly have these been? How effective have they been?

What government policies could improve them?

e. For those in Professional Associations and Trade Unions

How are professional associations/trade unions associated in health policy planning and development, in general and specifically related to the issue of migration?

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Are there demographic statistics tracking members leaving and returning? By gender? By health professional cadre?

How are efforts to improve domestic working conditions linked to the issue of migration?

What is your position on position on the migration of health workers?

Could you specifically address return migration and the situation for return migrants?

What about for in migration?

What are some of the policies/programs that have been tried or are of interest to address this issue?

How costly have these been? How effective have they been?

What government policies could improve them?

f. For Development Partners

Is your organization involved in any vertical programs?

What programs? Do these involve health workers? What cadres? How are they recruited?

What are the main priorities for your organization in Kenya with respect to HRH?

Where does migration of health professionals feature in the development partner agenda in your opinion? What influences this? How can that change?

Has your organization conducted any assessments of the HRH in Kenya?

How (if at all) is your organization involved in this process? Where can we get this information?

How does your organization work with the local government on health system strengthening initiatives?

HRH initiatives? At what level? Prompt: Macro, meso, micro.

3. FOR ALL STAKEHOLDERS

a. Policy Context

Please describe the HRH context in Kenya with particular reference to doctors, nurses and Clinical Officers.

How many (doctors, nurses, COs) would you say are trained annually?

Would you say this is enough to meet the HRH needs in Kenya (assuming no outward migration)? Why or why not?

Are there adequate employment opportunities within Kenya for the number who are trained? (highlighting both quantity and quality) Is this any different for men compared to women?

Are there adequate career advancement opportunities or specialized training opportunities to retain highly skilled HRH in Kenya? Is this any different for men compared to women?

What is the state of the official statistics on health workers in Kenya and of those who migrate? Within the country, internationally? Is this information available by gender?

b. Push/Pull Questions

What is the situation regarding migration of health workers in Kenya with respect to:

Rural to urban; public to private services; abroad; in-migration from local countries; How does this vary for men versus women?

Who is migrating and how do they learn about opportunities to migrate? Is it mostly men? Mostly women?

Why do you think this is so?

How significant are the different types of migration?

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In the policy context? To health workers? To your department? How does this vary for men versus women?

[Who are the key stake-holders involved in the migration of health workers?]*

Both visible/vocal and invisible yet powerful? Both local and international migration?

c. Stick/Stay/Return Questions

Is tendency of migration of health workers long or short term? Or permanent? Does this vary by men versus women?

What are some of the reasons why health workers chose to remain?

In rural areas? In urban areas? Are these factors any different for men versus women?

Discuss the situation with respect to return migration and the role of return migrant health personnel

How often do health workers return home? What are the usual purposes for such visits (family, work, volunteer HRH work)? Is anyone tracking these returns? How do they vary by gender?

Are prospects for professional advance enhanced by working abroad? Are those who return welcome?

4. Consequences of Migration

What are the most important consequences of the migration of health workers?

How important a factor are remittances in the migration of health workers?

What is the estimated value of remittances sent home by HRH?

How do they vary by health profession? By gender?

What other goods (besides cash) are being sent home by émigré HRH? How are remittances used (e.g. assisting families in obtaining health, education etc.; acquiring personal assets, investments; maintaining house/property)? Could remittances be used to reduce the 'push' factors for outward migration?

How would you describe health worker migration in relation to overall migration in Kenya?

Prompt: important, minor, etc...

What are the barriers in moving forward with managing migration of health professionals from Kenya?

What are some of the facilitators? How is your organization involved?

Is your organization involved with the local governments in Kenya to manage health worker migration locally and/or internationally?

How? Why or Why not? Has this been successful? What else could be done?

5. Promising Solutions

What are some promising solutions that we should investigate further to mitigate the negative consequences of the migration of health workers from Kenya?

What is the current or potential role of mid-level workers as a solution?

Are Clinical Officers a promising solution in this regard?

How can Clinical Officers be supported?

What would it take to scale up this cadre? What would be the barrier to scaling up of Clinical Officers?

From the other health cadres; from the hospital level; from the community; from the government?

How can these barriers be reduced?

APPENDICES

Do you have any data or information that you can share with me on HRH or migration of health professionals?

Do you have any other information to share?

THANK YOU FOR YOUR TIME!

APPENDIX G: HEALTH PROFESSIONAL IN-DEPTH INTERVIEW GUIDE

Source Country Perspectives on the Migration of Health Professionals: Push Pull Stick and Stay Factors and Policy Options in Kenya

Health Professional In-depth Interview Guide

Please describe your health profession?

Why did you choose your health profession a nurse/doctor/clinical officer?

Have you found this in your profession? How satisfied are you?

Have you considered migrating? Where do you intend to migrate to?

Why? (probe for in depth reasons)

What are your hopes/dreams/desires for moving to country x?

What are your anxieties/concerns about moving to country x?

Are there any barriers to your move which you need to overcome?

How have others assisted you in making this decision (probe for family, other migrant health professionals, recruiting agencies, employers)

Both visible/vocal and invisible yet powerful? Both local and international migration?

Stick/Stay/Return Questions

If you were to migrate would it be long or short term? Or permanent? Does this vary by men versus women?

What are some of the reasons why health workers chose to remain?

In rural areas? In urban areas? Are these factors any different for men versus women?

What factors relating to the living conditions would cause you to remain/leave?

What factors relating to your working conditions would cause you to remain/leave?

What are some of the policies that influence decisions?

Push/Pull Factors

Please describe the HRH context in Kenya as you know it in general and for your specific cadre.

Are there adequate employment opportunities within Kenya for the number who are trained? (highlighting both quantity and quality)

Are there adequate career advancement opportunities or specialized training opportunities to retain highly skilled HRH in Kenya? Is this any different for men compared to women?

What is the situation regarding migration of health workers in Kenya with respect to:

Rural to urban; public to private services; abroad; in-migration from local countries; How does this vary for men versus women?

Who is migrating and how do they learn about opportunities to migrate? Is it mostly men? Mostly women?

Why do you think this is so?

How significant are the different types of migration?

APPENDICES

In the policy context? To health workers? To your department? How does this vary for men versus women?

[Who are the key stake-holders involved in the migration of health workers?]*

Returned Doctors and Nurses

Which country did you move to? Tell me more about the process.

Why did you move there? Did you move to more than one country?

How long did you stay there? What was your experience with your employer while you were there?

What were the positive and negative experiences and challenges?

How long has it been since you've been back in Kenya and why did you return? What has been your experience since returning to Kenya?

Prompt: professionally? Socially?

What has been the attitude of other health workers towards you?

Other doctors? Nurses? Clinical Officers?

Was this different before you left?

How do you think the experience varies for men or women

Was this the only country that you worked in? Where else did you work?

Is your return permanent? If not where were/are you planning to go to?

What are some of the policies that influence decisions?

Consequences of Migration

What is the basis of the current tensions between the government and your health profession? Can they lead to migration? Why and how?

What are the most important consequences of the migration of health workers in your opinion?

How do remittances figure into these consequences?

What are the barriers in moving forward with managing migration of health professionals from Kenya?

What are some of the facilitators? How is your organization involved?

Is your organization involved with the local governments in Kenya to manage health worker migration locally and/or internationally?

How? Why or Why not? Has this been successful? What else could be done?

Promising Solutions

Is money the most important factor for improving conditions for health workers? What else is? What would you do with more remuneration?

What is the current or potential role of mid-level workers as a solution?

How does your cadre relate to Clinical Officers in Kenya?

Are Clinical Officers a promising solution in this regard?

How can Clinical Officers be supported?

What would it take to scale up this cadre? What would be the barrier to scaling up of Clinical Officers?

From the other health cadres; from the hospital level; from the community; from the government?

How can these barriers be reduced?

APPENDICES

How would scale up of Clinical Officers affect your cadre?
What are some promising solutions that we should investigate further to mitigate the negative consequences of the migration of health workers from Kenya?

Thank you so much for your time! If you have any questions please do not hesitate to contact me at [REDACTED] or by phone [REDACTED]

APPENDIX H: INFORMATION AND CONSENT FORM



Université d'Ottawa | University of Ottawa

Institute of Population Health | L'institut de recherche de santé des populations
1 rue Stewart Street
Ottawa, Ontario
K1N6N5

SOURCE COUNTRY PERSPECTIVES ON THE MIGRATION OF HEALTH PROFESSIONALS: PUSH, PULL, STICK AND STAY FACTORS AND POLICY OPTIONS IN KENYA

INFORMATION FORM

Brenda Adhiambo Dogbey, MSc. B.A., PhD Candidate, Institute of Population Health, University of Ottawa, [REDACTED]

Thesis Supervisor:

Ivy Bourgeault, PhD, Professor, Interdisciplinary School of Health Sciences, University of Ottawa [REDACTED]

Invitation to participate: You are being invited to participate in the above-mentioned research study.

Study Purpose: The purpose of this study is to better understand the push, pull, stick and stay factors that influence internal and international migration of health professionals in Kenya and to address the current situation.

Specific study objectives of this proposed research are:

1. To establish a detailed current contextual analysis of human resources for health in Kenya from multiple sectors including macroeconomic, policy, social and other factors, meso-level factors and micro factors.
2. To understand the migration perspectives of doctors and nurses in the Kenyan context
3. To explore the role of clinical officers as a policy option to address Kenya's HRH needs

The study is closely related to a larger study on the Source Country Perspectives on the Migration of High Trained Health Personnel: Causes, Consequences and Responses examining perspectives from South Africa, the Philippines, India and Jamaica of which I am a co-investigator.

Participation: You are being asked to participate in an in-depth interview to provide your perspectives on the migration of highly trained health personnel both internally and internationally within and from Kenya. The interview will be conducted in English and will take approximately 60 minutes. It will be conducted in-person by **Brenda Dogbey**, the principal investigator and will be transcribed in written form. If you indicate that you consent to recording of the interview, the interview will be recorded.

You will only need to answer the questions you feel comfortable answering; you can refuse to answer any questions.

Risks: There is minimal risk involved in participating in this study. You may feel uneasy about volunteering some information requested. The investigators will minimize these risks by

ensuring that your participation in this study remains voluntary, anonymous and confidential. Quotes may be used and you will be informed of any such use if you provide us with your contact information. Where quotes are used, they will not be attributed to you as an individual but will be treated as an expert opinion. Interviews will be conducted outside of official hours where possible unless you state your preference to be interviewed during official hours so as to minimize the risk of your participation in the study.

Benefits: This study will give you the opportunity to help generate knowledge that may contribute to improved healthcare system planning and human resources management in Kenya. It will also benefit national and international health policy-making by helping to identify the causes and consequences of the migration of highly trained health care professionals in your country.

Confidentiality and anonymity: Any information you share will remain strictly confidential, and will only be discussed among members of this research team. To protect your anonymity, your name will not be recorded with your responses or identified in any way. The interview will only identify institution you represent, but not you personally as an individual. Aggregate results will be published so your identity will not be revealed in any reports or publications. Your name will not be identified in any of the research publications and presentations. You may be identifiable in the research through your position title, however your direct name will not be published.

Conservation of data: All information collected from you're the interview will be kept in a locked filing system at the University of Ottawa in Canada. All computers on which study data will be stored will be password-protected. The data will be accessible only to Brenda Dogbey, the principal investigator and Prof. Ivy Lynn Bourgeault, her thesis supervisor. The study data will be stored for five (7) years following completion of the study from August 31st 2012 to August 31st 2019, after which time paper transcripts will be destroyed and electronic files will be deleted.

Compensation: There will be no monetary or other compensation for your participation in the study.

Voluntary Participation: Your participation is strictly voluntary and we will provide an information letter for your reference if you require one. You are under no obligation to participate and if you choose to participate, you can withdraw from the study at any time, for any reason, without consequence. If you choose to withdraw from the study, you may request that all data gathered until the time of your withdrawal be destroyed.

For More Information:

If you have any other questions or require more information about the study itself, contact Brenda Dogbey, the principal investigator at [REDACTED] or via email [REDACTED]

If you have any questions regarding the ethical conduct of this study, you may contact the Protocol Officer for Ethics in Research, University of Ottawa, Tabaret Hall, 550 Cumberland Street, Room 154, Ottawa, Ontario K1N 6N5, Canada, telephone: +1(613) 562-5387 or ethics@uottawa.ca



Université d'Ottawa | University of Ottawa

Institute of Population Health | L'institut de recherche de santé des populations
1 rue Stewart Street
Ottawa, Ontario
K1N6N5

Source Country Perspectives on the Migration of Health Professionals: Push, Pull, Stick and Stay Factors and Policy Options in Kenya (H 06-11-06)

WRITTEN CONSENT FORM

I (please print name): _____ agree to participate in the above-mentioned study "**Source Country Perspectives on the Migration of Health Professionals: Push, Pull, Stick and Stay Factors in Kenya**"

- If I choose to withdraw, I agree that all data gathered from me may continue to be used in the study: Yes No
- I agree that data may be used for pedagogical purposes such as in classes by professors, workshops, presentations and case studies. **All personally identifying** information will be **removed or altered** and data shall not reveal my identity or the identity of my employing organization: Yes No
- I agree that the conversation may be recorded using a digital recorder Yes No
- I am aware that the information I share might be identifiable to me as an key informant Yes No
- I have retained a copy of this Consent Form for my records: Yes No

Your signature on this form indicates that you have understood to your satisfaction the information regarding your participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the investigators, or involved institutions from their legal and professional responsibilities:

Participant's signature: _____ Date: _____

Interviewers signature _____ Date : _____

Participant's contact information (optional):

Tel: _____ E- mail: _____

APPENDICES

APPENDIX I: MID-LEVEL HEALTH WORKERS SCOPING REVIEW SEARCH STRATEGY (OCTOBER 2015)

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10. "Emigrants and Immigrants"/
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19. Physicians, Primary Care/ or Physicians, Family/ or Physicians/ or Physicians, Women/
20. doctor*.mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]
21. Nurses/
22. Nursing Staff, Hospital/ or Nurses/
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24. physician assistant*.mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]
25. Physician Assistants/
26. Pharmacists/

APPENDICES

27. pharmacist*.mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]
28. clinical officer*.mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]
29. health [personnel.mp](#). [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]
30. (health adj2 personnel).mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]
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32. Dentists/
33. dentist*.mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]
34. Primary Health Care/
35. "Delivery of Health Care"/
36. mid-level worker*.mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]
37. (mid adj2 level adj2 worker*).mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]
38. Allied Health Personnel/
39. non-physician clinician*.mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]
40. 1 or 2 or 3 or 4 or 5
41. 24 or 25 or 28 or 36 or 37 or 38 or 39
42. 40 and 41