AN EXPLORATORY DESCRIPTIVE

STUDY ON TASK SHIFTING

by

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Abstract

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STUDY ON TASK SHIFTING

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Task shifting is an approach to meeting population health needs in developing countries that is encouraged by the WHO and increasingly embraced by Ministries of Health. Task shifting has been implemented formally and informally for years in areas of human resource shortages. While often used, there is a lack of published information available about how best to prepare nurses to take on the expanded role.

The nursing intellectual capital (NIC) theory was the theoretical framework for this study. NIC is derived from a business model and is used to represent the manner in which investments in the nurse and healthcare infrastructure that supports the nurse increases the nurses' knowledge and skill set, thereby positively impacting patient outcomes.

Nurse leaders in Kenya, Ethiopia, Uganda, and Tanzania were interviewed to explore task shifting practices and preparation. Fourteen interviews were conducted in person, via web-based communication, and telephone. Transcripts of the interviews were analyzed for themes. The major themes were "nurses' burden," "patient perception," "regulatory needs" and "nurse preparation". These reflect the common themes surrounding task shifting as conveyed by the nurse leaders. The major themes include those related to the nurses' burden in the presence of extreme healthcare provider shortages and the WHO push for task shifting. The best practice in education was explored in some detail and the need to create site and task specific education was clearly articulated by the nurse leaders. The theme that emerged was an undergirding for all aspects of task shifting related to policy and regulatory support. The need for clear policies about task shifting and a clearly defined nursing scope of practice were overarching and consistent themes.

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Chapter 1

Introduction to Task Shifting

Providing healthcare in developing countries has long been fraught with challenges, and people continue to die due to a lack of healthcare (World Health Stats, 2011). Barriers to reaching population health goals are, in part, due to an insufficient number of healthcare providers (Baumann & Blythe, 2008; Collins, Glass, Whitescarver, Wakefield, & Goosby, 2010; Fulton et al., 2011; Kinfu, Dal Poz, Mercer, & Evans, 2009; Travis et al., 2004). Task shifting is one of the approaches endorsed by the World Health Organization (WHO) to expand the provision of care and to determine how best to use the available human resources for health (HRH) to meet population health related needs (World Health Organization [WHO], 2008c).

Task shifting is the reallocation of tasks from healthcare providers with higher levels of training and education to those with less training. It is inefficient to have healthcare providers, who are either over-qualified or under-qualified, incorrectly assume responsibility for a role (Travis et al., 2004). Task shifting is a way to help alleviate inefficiencies by the carefully considered reassignment of health-related tasks. The WHO deems task shifting to be the "rational redistribution of tasks among health workforce teams" (WHO, 2008c).

Malaria, tuberculosis, and HIV/AIDs cause the death of three million people each year in Africa (World Health Organization [WHO], 2010). In addition, the highest concentration of countries with the worst maternal morbidity and infant mortality are in Africa (Bangdiwala, Fonn, Okoye, & Tollman, 2010). These deaths are largely preventable or treatable with the major problem being the lack of adequate healthcare access and, specifically, the lack of human resources for health (HRH). The World Health Organization (WHO) has supported task shifting

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as a means to provide more healthcare to more people so that the Millenium Development Goals (MDGs) might be met (WHO, 2010). This chapter will introduce the background and what is not known about task shifting for a exploratory descriptive qualitative study of the education and preparation of nurses for task shifting in selected countries from the perspective of nurse leaders.

Background and Significance

Millenium Development Goals and Global Needs

Healthcare and poverty are closely related as evidenced by the United Nations MDGs established to target the reduction of extreme poverty; three of the eight goals directly address healthcare (United Nations, 2010). The MDGs consist of eight goals, 18 targets, and 48 indicators (see Table 1) (United Nations, n.d.; Waage et al., 2010). The MDGs were adopted by 189 countries during the United Nations (UN) Millenium Summit in September of 2000 to address the needs of people living in poverty (Devarajan, Miller, & Swanson, 2002; Travis et al., 2004). The elimination of deprivation in the poorest populations around the world has a lengthy, complex, and controverial history but the MDGs clear mandate, multi-sectorial approach, multilateral engagement, and widespread support led to their adoption (Devarajan et al., 2002; Hulme, 2009). The UN Millenium Summit was the culmination of a decade of meetings, conferences, and sector-specific and regional UN-sponsored summits to create a comprehensive, measureable and applicable approach to global development (United Nations, n.d.; Waage et al.,2010). To achieve the overarching purpose of the MDGs to eliminate extreme poverty by the year 2015, concerted global efforts have been implemented with clear time bound targets and specific indicators to quantify success (Devarajan et al., 2002; Devarajan et al., 2002; Hulme, 2009). The MDGs, while not without critics, have resulted in unprecedented mobilization of the global community for a focused effort (Devarajan et al., 2002; Hulme, 2009); Waage, 2010).

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To reach the MDGs, increased access to healthcare is needed. Essential to providing adequate access is the need for more human resources (Baumann & Blythe, 2008; Collins et al., 2010; Fulton et al., 2011; Kinfu et al., 2009; Travis et al., 2004). A significant limiting factor in HRH is the difficulty in determining how to best 'scale up' or increase the numbers of qualified providers (Bangdiwala et al., 2010); Kenya Health Workforce, n.d.; WHO, 2011). This issue, while currently urgent, is not new, nor will it vanish as the MDGs deadline approaches.

Healthcare Providers

Having enough healthcare providers to provide adequate healthcare to people in developing countries has long been fraught with challenges. Developing countries have limited capacity to educate healthcare providers and providers are lost due to migration to more affluent countries (Bangdiwala et al., 2010); Kenya Health Workforce, n.d.; WHO, 2010b; WHO, 2011). To meet basic healthcare needs, countries will need more than 23 nurses, physicians, and midwives combined per 10,000 people (WHO Stats Workforce, 2009). Currently in Europe, there are 79 nurses per 10,000 people. In the United States, there are almost 98 per 10,000 (World Health Organization, 2013). Across sub-Saharan East Africa, there are fewer than two physicians per 10,000 people. In Uganda, there are thirteen nurses per 10,000 people and, in Tanzania, there are only two nurses per 10,000 people (World Health Organization, 2013a;WHO, 2013b; WHO Stats Workforce, 2011). The shortage is exacerbated by the maldistribution of healthcare providers, with the preponderance of people living in rural areas and the majority of providers being located in urban settings (WHO, 2011).

The HIV/AIDs epidemic has compounded the problem of inadequate HRH by increasing the number of people who are ill and in need of healthcare and by decreasing the number of healthcare providers through HIV related illness and death (WHO, 2011). The unresolved

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infectious disease epidemics in Ethiopia, Kenya, Tanzania and Uganda are further complicated

by an increase in chronic conditions such as diabetes and hypertension (O'Brien & Gostin, 2011).

The imbalance between the heightened need for care and the availability of healthcare providers

has resulted in the need for task shifting.

Task Shifting

Task shifting, the rational redistribution of tasks among health workforce teams (WHO,

2008), would enable more people in developing countries to receive healthcare. Experts agree

that many tasks, such as deworming, treating malaria, providing prenatal care, treating routine

childhood illnesses, and diagnosing and treating pneumonia and minor surgical procedures, can

be successfully delegated to members of the healthcare team other than the physician (Callaghan

et al., 2010; Huicho, Scherpbier, Nkowane, & Victora, 2008). Nurses across sub-Saharan Africa

are involved in task shifting as they provide clinical management for millions of people with

HIV/AIDS, care that would typically be provided by physicians if they were present (Callaghan,

Ford, & Schnieder, 2010; Gilks, et al., 2006; Yakam & Gruénais, 2009). For example, the WHO

(2011) estimates that each year 1,500 pregnant and laboring woman die, who could and should

survive if appropriate healthcare providers were available through task shifting.

As a frequent visitor to Africa I have observed task shifting in several countries. I have

observed a nurse in rural Uganda initiate medical treatment for a child with cerebral malaria, and

undoubtedly save the child's life because the doctor was in the operating theatre. I have held a

flashlight while an Ethiopian nurse helped a woman give birth to a breech delivery because the

nearest midwife was attending another delivery. In Ethiopia, Malawi, Sierra Leone, and Uganda,

I have seen nurses and clinic officers, working in health centers without an onsite physician,

diagnose and treat a myriad of neglected tropical diseases that would challenge a Western

infectious disease specialist. I have observed the nurse deferentially stand and offer her chair and the single stethescope on the hospital ward to a physician, only to be expected to provide appropriate care for all patients when the physician is unavailable. My observations are consistent with findings from a focus group study about task shifting that was conducted in Uganda in 2012 (Spies & Gray, 2012, unpublished data). The participants in the focus groups explained that nurses are consistently expected to take on tasks beyond their traditional scope of practice.

Role Preparation

Global awareness of the multifaceted nature of preparing healthcare providers has increased. The World Health Organization (WHO) has developed 22 recommendations related to task shifting, and six of them are specific to ensuring quality of care (WHO, 2008). The WHO (2011) details healthcare provider education to meet population needs in terms of "quantity, quality, and relevance" (p.4). The WHO (2008) calls for countries to adopt a systematic approach to training that is "harmonized, standardized and competency-based" (p.28). The authors of the report note adequate information has not been collected about the education programs currently used. Education for healthcare providers is only 1.8% of global health expenditures, a lamentable contribution to what should be a high priority focus for spending (WHO, 2011). Because task shifting will continue for the foreseeable future, the World Health Organization has called for an evaluation of the best way to prepare providers for the expanded roles of task shifting ((World Health Organization, 2008). Although task shifting is employed in many developing countries, few studies were found describing nurses' preparation for the expanded role of task shifting. Gaining insight into nurse leaders' perspective may help to shift attention to the details of preparing nurses and other healthcare workers.

Nurse leaders from selected African countries were interviewed. Because the countries of East Africa have diverse cultures and health systems, the decision was made to narrow the scope of this study to Ethiopia and three additional countries that participate in the East Central South African College of Nursing (ECSACON): Uganda, Tanzania and Kenya (Figure 1). The idea for regional nursing groups arose from an International Council of Nurses meeting and, as a result, former commonwealth African countries were recognized by the Council of Health Ministers in 1988 (Ndlovu, Phiri, Munjanja, Kibuka, & Fitzpatrick, 2003). ECSACON is a part of the ESCA Health Community or ESCA-HC (ECSAON, n.d.) Ethiopia is not a part of ECSACON but is geopraphically located on the eastern side of the African continent and is contiguous with Kenya. Nurse leaders from Ethiopia were included in the study to possibly garner a different perspective. The data the nurse leaders provided may increase the available knowledge about how nurses are currently being educated and prepared to engage in task shifting in their respective member countries (Ndlovu et al., 2003).
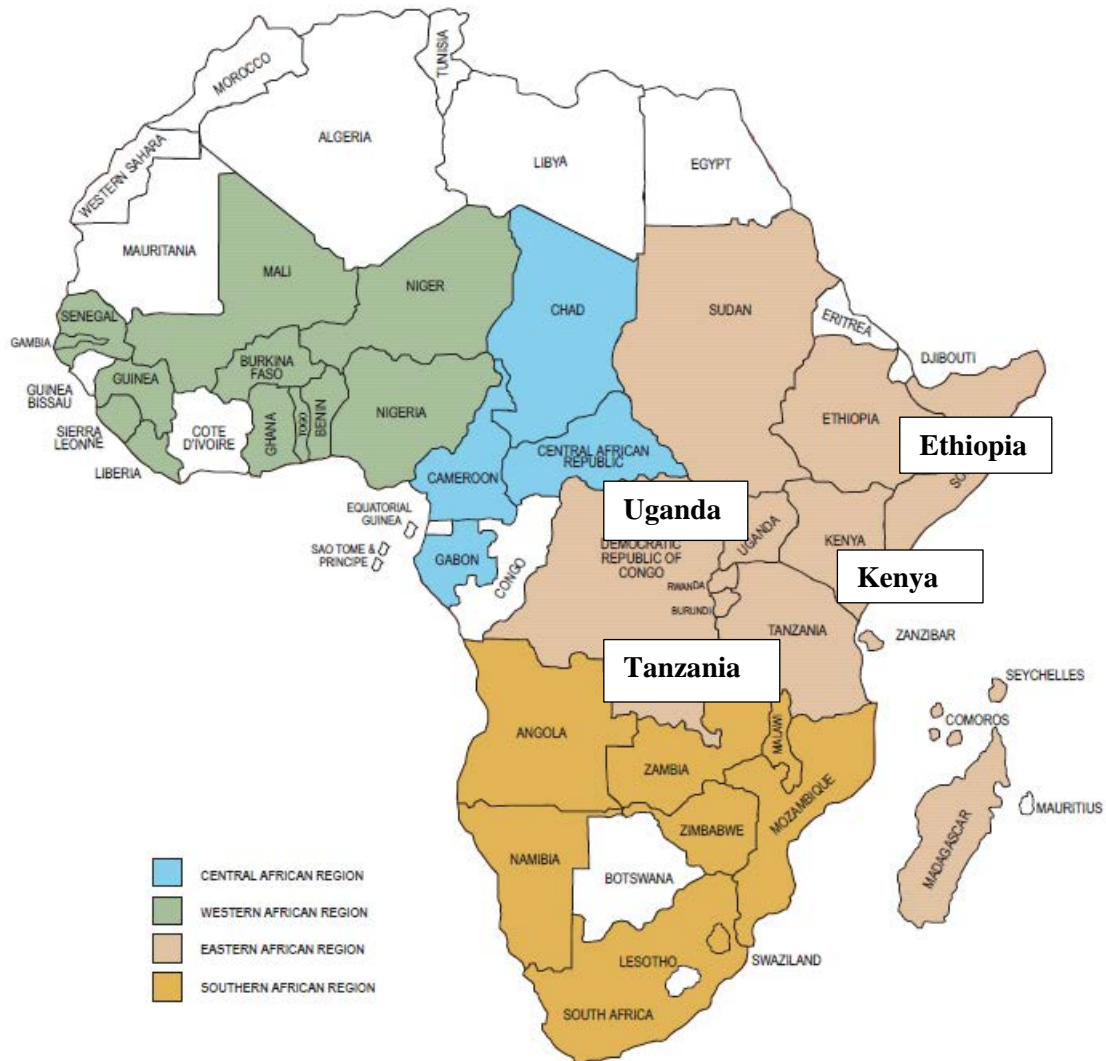
Figure 1-1 Regional Map of Africa

http://www.friendsoffawe.org/where-does-fawe-help/CIA World Factbook

Philosophical / Theoretical Perspective Framework

The middle range theory of nursing intellectual capital (NIC) (Covell, 2008, 2011) was used to guide the proposed research. In this qualitative study, the use of theory was appropriate due to the primary purpose being to assess and describe a specific topic (Grove, Burns, & Gray, 2012), the education and preparation of nurses as an investment in the individual nurses and the collective nurse to ultimately improve patient and population outcomes. Sandelowski (1993)

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enumerates many ways theory can facilitate qualitative research. In this study, the NIC theory was used to select the research approach, and inform the development of an interview protocol and was used guide the analysis of participant responses.

The Intellectual Capital (IC) theory, originating in economics and accounting, is the theory on which the NIC theory is based. IC has been used to explore the relationship between human, structural, and social capital and business performance (Edvinsson, 1997; Stewart & Losee, 1994). In the IC theory, human capital is defined as the knowledge, experience, and skills held by the individual (Edvinsson, 1997; Mention, 2012). The knowledge that is a part of the business organizational systems is identified as structural capital (Covell, 2008; (Edvinsson, 1997; Stewart & Losee, 1994). As an adaptation of the IC, Covell (2008, 2011) developed NIC to explore the relationship between investing in the skill and knowledge of the nurse, i.e. nursing intellectual capital, and how that contributes to desired corporate outcomes such as low staff turnover and improved patient outcomes. Nursing intellectual capital (see figure 1-2) is composed of nursing human capital, nursing structural capital, and nursing social capital (Covell, 2011). The study considered the investment in nursing intellectual capital by governments or other agencies through pre-service education, continuing professional development, and on-the-job training related to task shifting. Nursing human capital consists of the knowledge and skills of the nurse while nursing structural capital is comprised of the tools that support the nurse such as protocols and practice guidelines (Covell, 2008). Nursing social capital "refers to the time, patience, teaching, etc., that individuals 'invest' in each other in relatively closely knit social groups and peers" (Gopee, 2002 p 609). Participation in professional development activities and a work environment that supports members and encourages the sharing of knowledge develops nursing social capital (Covell, 2008; Gopee,

2002; Royal, 2011). The examination of pre-service education, continuing professional development and the on-the-job training of the nurses engaged in task shifting were considered investments in the nursing human capital and served as exemplars of the NIC theory. The investment in nurses' human capital in the context of NIC theory should improve the nurses' effectiveness (Covell, 2011).

An explicit assumption of the middle-range theory of NIC (Covell, 2008, 2011) proposes a link between the knowledge, skills, and experience of the nurse. Nursing knowledge embedded in the healthcare organization is pertinent to nursing and organizational performance outcomes (Covell, 2008, 2011; Weston, Estrada, & Carrington, 2007). The particular way the nurse is prepared to take on the expanded task shifting role is relevant to the quality of care that is provided, and quality of care is linked to patient outcomes (Davidson, 2007; Hall, 2003; Hlahane, Greeff, & du Plessis, 2006; Weston, Estrada, & Carrington, 2007). Covell (2011) proposed that investment in nurses is related to health system performance.

For this study, the NIC theory was expanded to consider that, as the performance of health systems improves, the health of the population also are improved (Figure 2). The investment in nursing intellectual capital may have an impact on the crisis in human resources for health and contribute to the achievement of the MDGs. The investment in the preparation of the nurse for task shifting may improve patient outcomes, an overarching and significant benefit for the health system and population health outcomes. This study was designed to increase available knowledge about nurses' preparation for their expanded role in task shifting and identify how investment in nursing intellectual capital is currently occurring in selected African countries. This information was needed to explore current methods used to develop nurses' intellectual capital. By increasing the current body of knowledge about nurse preparation to

assume task shifting, more effective and efficient methods of preparation may be developed. The

information can then be adapted to prepare nurses to better contribute to patient and population

outcomes. Increased nursing participation in continuing professional development is assumed to

result in application of learned content (Covell, 2008, 2011). Although not the focus of this

study, the theory may be applicable to nurse migration to other countries by linking nurse

availability and migration to an increase in investment in the nurse. Another implicit assumption

in the theory is the need for healthcare organizations to place greater value on nursing

contributions and promote nursing human capital organizationally to improve patient outcomes

(Covell, 2008, 2011; Weston, Estrada, & Carrington, 2007).
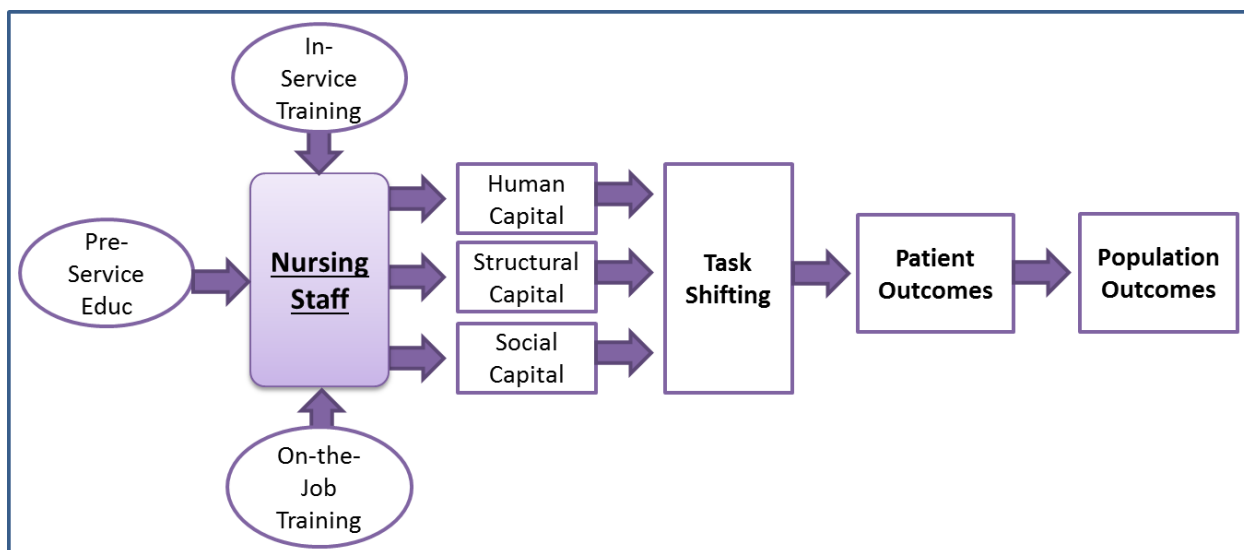
Figure 1-2 Spies Task Shifting Model ©

Purpose Statement

The purpose of this exploratory descriptive qualitative study was to analyze the perspectives of the nurse leaders in selected African countries on pre-service education, continuing professional development and on-the-job training used to prepare nurses for the expanded roles of task shifting.

Study / Research Questions

1. How are nurses in selected African countries prepared through formal education, continuing professional development and on-the-job training for task-shifting?

2. How does the preparation of nurses for task shifting vary between countries?

3. What are best practices related to preparation for task shifting?

Assumptions

Assumptions are statements believed true although not explicitly tested (Grove, Burns, & Gray, 2012). The following were assumptions of this study:

1. Nurses will continue to participate in task shifting.

2. Nurses comprise a critical component of human resources for health.

3. Preparation contributes to nurses' ability to take on expanded roles.

4. Population health is improved by appropriate use of task shifting.

Summary

To meet the most basic population health needs in sub-Saharan Africa, a multifaceted approach is needed. Task shifting has been in existence for decades and will continue to be an important part of meeting population health needs (Bucciardini et al., 2006; Callaghan, Ford, & Schneider, 2010; Mullan & Frehywot, 2008). The dire shortage of physicians, nurses, and all

HRH increasingly necessitate that providers take on new tasks. To achieve the health related MDGs, the WHO (2008) has encouraged the implementation of task shifting across Africa to address the shortage of human resources for health. With the certainty of ongoing task shifting, it is imperative that healthcare providers and nurses in particular, are appropriately prepared. Nurse education, pre-service, continuing professional development, and on-the-job training are needed to ensure healthcare standards are met. To effectively and efficiently prepare more nurses to adopt task shifting, more information about the current process is needed (WHO, 2008c). This study was conducted to address the gap in knowledge about how nurses are prepared for task shifting.

Chapter 2

The State of the Science

Extreme poverty is the status quo in much of East Africa and it is intricately linked to

population health. A clear example of poverty's impact is the connection that is manifest in

widespread limited access to healthcare (Lewin et al., 2008; O'Brien & Gostin, 2011). Poverty

limits the ability to travel to obtain healthcare when it is not available locally. It affects the

amount of government funding available to educate new healthcare workers and to pay

healthcare providers (Bangdiwala et al., 2010; Callaghan et al., 2010; Chen et al., 2004; Collins

et al., 2010; Hall & Buch, 2009). The MDGs, goals set to eliminate extreme poverty, are far from

being attained in Sub-Saharan Africa (SSA). Achieving the MDGs would have a tremendous

impact on almost every facet of life, including health, in Kenya, Ethiopia, Tanzania, and Uganda

(United Nations, 2012). An essential component in improving access to healthcare and,

subsequently, population health is in the increasing the number of appropriately prepared

healthcare providers, human resources for health (Baumann & Blythe, 2008; Collins et al., 2010;

Fulton et al., 2011; Kinfu et al., 2009; Travis et al., 2004). While the idea of task shifting is not

new, the pressing need to deliver antiretroviral therapy (ART) for people across the African

continent due to the current HIV/AIDS epidemic has led to increased demands for more

healthcare providers (Bangdiwala et al., 2010).

The World Health Organization (WHO) has identified a critical workforce shortage in 57

countries, with 36 of those countries being in Africa (Global Health, 2008). The scarcity of

healthcare workers is not new but the impact is increasing due to greater need for care. To

address the dearth of healthcare providers, and the negative sequelae on population health, the

WHO has included task shifting as an important component in mitigating healthcare issues

(WHO, 2008c). Task shifting is being widely adopted for purposes of increasing access to care in environments of poverty-induced scarcity (Callaghan, Ford, & Schneider, 2010; Lewin et al., 2008; Zachariah, Ford, & Philips, 2009). This chapter will examine the literature related to task shifting in the context of nurses in Sub-Saharan East Africa. The review is organized to present literature on health, human resources for health, the MDGs, the WHO task shifting model, nursing preparation and policy related to task shifting in East Africa and task shifting outcomes.

Health

East Africa is noted repeatedly as an area in health crisis. Throughout the region dire poverty, the absolute inadequate number of healthcare providers, new and expanding epidemics, and increasing chronic health conditions have created multiple vulnerable populations with precarious health (Ethiopia Ministry of Health, 2011(Callaghan et al., 2010; Chen et al., 2004; Collins et al., 2010; Fulton et al., 2011).

When examined in the context of the USA healthcare system, the healthcare statistics of Ethiopia, Kenya, Tanzania, and Uganda reveal health disparities of great magnitude. East Africa has 280 premature deaths per 1000 with a variation from Ethiopia of 350/1000 to Kenya with 170/1000 (Ethiopia Ministry of Health, 2011; UNAIDS, 2008; United Nations, 2011; World Health, 2009). Table 1 contains health provider numbers and health outcomes for the four countries of interest. For example, the life expectancy of a man born today in Uganda is 26 years less than a man born in the USA. The magnitude of the disparity is exemplified in the maternal morbidity in Tanzania by the rate of 460 deaths per 100,000 versus the US rate of 21 in 100,000.

Healthcare in East Africa is provided by government-funded system overseen by a Ministry of Health. While each country has subtle differences, the general systems share the common theme of small community clinics, ideally staffed by nurses who refer to area clinics

that have a clinical officer and a nurse to provide care. The catchment area varies by geography,

population, and indigenous culture. The providers in community clinics refer patients to district

or regional hospitals and ultimately to the national hospitals. The health centers in Uganda have

specific roles and are numbered health center one through health center three. In Ethiopia, the

districts are called Woredas which can be divided into local wards (K. Scheel, personal

communication, March 18, 2012).

Table 2-1 Key Health Related Indicators

	Ethiopia	Kenya	Uganda	Tanzania	USA
*Life Expectancy Woman/Men in years	62 / 58	59 / 57	55 / 54	60 / 58	81 / 76
**Physician / Nurse and midwife per 10 000	<1 / 2 (2009)	1 /12 (2009)	<1 / 4 (2009)	1 / 7 (2009)	26 / 94 (2009)
Percentage living on < $1/ day MDG Goal 1 Target 1a	9.6 (2005)	16.9 (2005)	12.2 (2009)	28.1 (2007)	n/a
Births attended by skilled provider % MDG Goal 5 Target 5.2	10% (2011)	43.8% (2008)	41.9% (2006)	48.9% (2010)	99% (1999)
Maternal morbidity Per 100 000 MDG Goal 5 Target 5.1	350 (2010)	360 (2010)	310 (2010)	460 (2010)	21 (2010)
Infant mortality Per 1000 Goal 4 Target 4a 4.2	51.5 (2011)	48.3 (2011)	57.9 (2011)	45.4 (2011)	6.4 (2011)

Table 2-1 - continued

	Ethiopia	Kenya	Uganda	Tanzania	USA
HIV/AIDs prevalence MDG Goal 6 Target 6a	0.9 / 1.9 (2005)	4.6 / 8.7 (2003)	5.0 / 7.5 (2005)	4.6 /6.6 (2007)	*** .08 (2008)
Under Five mortality rate Per 1000 MDG Goal 4 Target 4a 4.1	77 (2011)	72.8 (2011)	89.9 (2011)	67.6 (2011)	7.5 (2011)

*United Nations. (December, 2011) Life expectancy table 2a.
http://unstats.un.org/unsd/demographic/products/indwm/ww2005/tab3a.htm

** *World Health Statistics 2009; table 6: Health workforce, infrastructure, essential medicines.* (2009). Geneva, Switzerland: World Health Organization Statistical Information Systemes. Retrieved from http://www.who.int/whosis/whostat/2009/en/index.html

***UNAIDS. (2008). Aids info Epidemiology fact sheet United States.
http://www.unaids.org/en/regionscountries/countries/unitedstatesofamerica/

Millennium Development Goals Indicators. (2012). http://mdgs.un.org/unsd/mdg/Default.aspx

Human Resources for Health

There is a correlation between HRH, the health of the people living in a country, and the ability to achieve the Millennial Development Goals (Born et al., 2012; Chen et al., 2004). Meeting basic population health needs requires a combination of doctors, nurses, and midwives equal to 2.28 per 1,000 people (World Health Organization, 2009) . There are not enough healthcare providers globally to meet even the WHO recommended, sparse levels of coverage, particularly in the poorest countries (Munjanja, Kibuka, Dovlo, & International Council of Nurses, 2005; O'Brien & Gostin, 2011). The inadequacy of the HRH is further compounded by the preponderance of providers in urban rather that rural areas. In Ethiopia, 1/3 of physicians and

1/6 of nurses work in the capital city of Addis Ababa, where less that 5% of the people live (Ethiopia Ministry of Health, 2011).

The perspective with which HRH are viewed has changed over the last several decades as reflected by the increasingly used term "human resources for health itself" (Bärnighausen & Bloom, 2009). The increased funding for HIV research and treatment in recent years has resulted in expanded antiretroviral drug global availability. This availability has resulted in an unmet demand for HRH to properly distribute, administer, and support their appropriate use (Bärnighausen, Bloom, & Humar, 2007). The current limitation in healthcare is often driven by a lack of adequate numbers of HRH (Bärnighausen, Bloom, & Humair, 2007; Biesma et al., 2009; Kenya Health Workforce, n.d.; Task shifting, 2008; Uganda Ministry of Health 2010b; World Health Organization, 2008).

Of national expenditures for health in East Africa, 50 to 70% are directly related to paying healthcare providers (Hernandez, Dräger, Evans, Tan-Torres Edejer, & Dal Poz, 2006; Ranson, Chopra, Atkins, Dal Poz, & Bennett, 2010). The high cost of the front line providers necessitates deliberate and appropriate utilization of the HRH. Policies must be developed and applied to assure healthcare dollars are well spent and that providers are being used optimally (Kenya Health Workforce, n.d.). Expanding delivery of healthcare services necessitates consideration of task shifting practice, preparation and outcomes (Task shifting, 2008; WHO, 2011).

The WHO Task Shifting Model

The WHO identifies four levels of task shifting that involve the extension of the physician's scope of practice to non-physician clinical officers, nurses and midwives, community health workers, and patients (WHO, 2008). To enable the successful implementation of task

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shifting and address the HRH shortage, the WHO (2008) developed and published recommendations and guidelines. Low and middle income countries are encouraged to adopt task shifting to address the global shortage of HRH as part of a comprehensive public health initiative. The WHO recommendations include creating an enabling regulatory environment for task shifting implementation. Task shifting will improve the quality of care and ensure sustainability and organization of clinical care services. An overarching theme of the WHO task shifting framework is that it is designed to be incorporated into a larger plan to strengthen the entire healthcare system to meet the MDGs (WHO, 2008).

Task shifting occurs when services that were once only provided by physicians become the responsibility of nurses. In a trickle-down effect, many responsibilities of the nurse are transferred to the community health workers. Shifting tasks to nurses has been occurring for many years and encompasses a variety of activities (Callaghan et al., 2010; Mullan & Frehywot, 2008; Stevens, Mathijs, & Bomela, 2009). Task shifting is demonstrated with varying success by nurses working across East Africa (Callaghan, Ford, & Schnieder, 2010; Gilks, et al., 2006; Yakam & Gruénais, 2009). The nurse's role has frequently been expanded due to task shifting and includes prescribing antiretroviral therapy (ART) across East Africa (Callaghan et al., 2010; Fulton et al., 2011), providing diabetes treatment in Cameroon (Labhardt, Balo, Ndam, Grimm, & Manga, 2010), performing adult male circumcisions to prevent HIV AIDs in Uganda (ECSA-HC, 2010; Katz & Wright, 2008), providing Integrated Management of Childhood Illnesses (IMCI) in numerous countries (Huicho, Scherpbier, Nkowane, & Victora, 2008), and conducting eye surgery to prevent the blindness caused by trachoma in Ethiopia (A. Wada, personal communication, March 9, 2011).

These examples illustrate the many ways that task shifting has been used in low resource settings where there are limited HRH. The increased focus on task shifting as a tool to expand healthcare access began as an effort to achieve the health related MDGs. The lack of HRH globally, as it limits attainment of the MDGs, is a driving force in task shifting (Babigumira et al., 2009; Bärnighausen et al., 2007; Sherr et al., 2009).

Millennial Development Goals

The United Nations established the MDGs in the year 2000 to meet the needs of people who live in extreme poverty. The MDGs consist of eight goals with defined indicators linked to each goal (Waage et al., 2010). Three of these goals directly address healthcare (Table 2); one to improve child health (MDG 4), one related to improving women's health (MDG 5), and one that targets HIV/AIDS and infectious diseases such as malaria (MDG 6). Each of the MDGs has multiple specific targets to be reached by 2015 (United Nations, 2010; United Nations, n.d.). An estimated 33.3 million people were living with HIV/AIDs globally in 2009 (World Health Statistics, 2011). The HIV/AIDs epidemic has significantly increased the need to improve the provision of healthcare across Africa (Munjanja et al., 2005; Sherr et al., 2009; Uganda Ministry of Health, 2010b).

Table 2-2 Millenium Development Goals Summary

Millenium Development Goal	Sample Target	Sample Indicator
1. Eradication of Extreme Poverty and Hunger	Halve the proportion of people who live on less than a dollar a day	Proportion of population living on less than $1.25 a day
2. Provision of Universal Primary Education	Ensure children everywhere, boys and girls alike, will be able to complete primary education	Net enrollment in primary school

Table 2-2 - continued

Millenium Development Goal	Sample Target	Sample Indicator
3. Promotion of Gender equality	Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015	Net enrollment ratio in primary education.
4. Reduction of Childhood mortality	Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate	Under-five mortality rate
5. Reduction of Maternal Morbidity	Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio	Proportion of births attended by skilled health personnel
6. Combat HIV/Aids, malaria and other diseases	Have halted by 2015 and begun to reverse the spread of HIV/AIDS	HIV prevalence among population aged 15-24
7. Ensure Environmental Sustainability	Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources	Proportion of land covered by forest
8. Create Global Partnerships for Development	Develop further an open, rule-based, predictable, non-discriminatory trading and financial system	Net ODA, total and to the least developed countries, as percentage of OECD/DAC donors' gross national income

The MDGs Report 2012 highlights both the global success stories and the failures (United Nations, 2012). Reductions in extreme poverty, MDG 1, around the globe is on schedule to meet the target of reducing the number of people who live on less than $1.25 a day (United Nations). According to the United Nations (2012), while there has been an increase in access to HIV care, which is an MDG 6 target, much of the world, especially SSA, remains far from the realization of universal access to care. SSA has reduced childhood mortality, MDG 4, by 30%, an impressive effort, but far short of the goal of 2/3 reduction (United Nations). Neonatal morbidity has decreased, with the slowing of deaths globally from 32 deaths per 1,000 live births in 1990 to 23 deaths per 1,000 in 2010. Strikingly, the rate in SSA remains tragically high at 35

deaths per 1,000 live births. MDG 5, to reduce by three-quarters the maternal mortality ratio, has not been reached. In SSA, the maternal deaths per 100,000 live births is 500; 10% of those deaths are attributed to HIV (United Nations, 2012).

For the health-related MDGs to be attained, many more people in developing countries must have access to appropriately educated and skilled healthcare providers. The WHO (2010) has promoted task shifting and a variety of ways to deliver primary healthcare to more people. Task shifting has been identified as an essential component in expanding the delivery of care to the population of SSA ((Lewin et al., 2008; Price & Binagwaho, 2010; World Health Organization, 2008) . As the largest number of healthcare providers globally, and as providers of 80% of healthcare in Africa, nurses are significantly impacted by task shifting (Kendall, 2008; Ng'ang'a & Byrne, 2012; Riley et al., 2007). An evaluation of task shifting must consider nurses' role and preparation for the expanded responsibility (*MDG Africa,* 2008; Munjanja et al., 2005; World Health Organization, 2008). Task shifting as proposed by the WHO is a large-scale program that impacts nurses in a variety of ways. Adopting the task shifting strategies requires multiple steps and engagement with patients, providers, and policy makers. Countries that elect to undertake task shifting must consider many stakeholders. One priority is to address the complex policy implications involved in the nurses' pre-service education, in-service education, and on-the-job training (Colvin et al., 2010). "Through a chain of events flowing from effective learning to high-quality services to improved health, professional education at its best makes an essential contribution to the wellbeing of individuals, families, and communities" (Frenk et al., 2010, p.1).

Nurse Pre-Service Education

Nurse preparation varies nationally, regionally, and between education programs (Baumann & Blythe, 2008; Gow, George, Mutinta, Mwamba, & Ingombe, 2011). Nurse education in Africa has its origin in mission hospitals (Munjanja et al., 2005). As an example, in Uganda, there are several routes for entry into the profession of nursing and 14 separate cadres of nurses (J.K.Wakida, personal communication, July 19, 2012). The Ugandan Health System currently has registered nurses, certificate nurses, enrolled nurses, comprehensive enrolled nurses, and nurses that hold degrees of nursing science (ECSA-HC, 2010; Uganda Nursing Department, 2012). In Kenya, there are 20 cadres of nurses that include;: five types of certificate programs, four basic diploma programs, ten post-basic and specialization diploma programs, and a bachelor's of science in nursing (Karani, Milimo , & Kuria, 2012; Nursing Council of Kenya, 2012). Tanzania has two levels of nurses, registered, and enrolled (TNMC, 2007). The Tanzania Nurse and Midwife Council developed standards for nurse education to address the nursing shortage, the MDGs, and health needs (TNMC, 2007).

Enrolled nurses, comparable to licensed practical nurses in the United States, comprise the majority of nurses currently practicing in Uganda (Riley et al., 2007; Thompson & Cechanowicz, 2007). The comprehensive nurse was introduced in Uganda in 1993 (Uganda Nursing Department, 2012) in response to an emphasis on the provision of primary care (J. Mwizerwa, personal communication, July 10, 2012; ECSA-HA, 2010). In Uganda, enrolled nurses and midwives have one and one-half years of pre-service education; comprehensive nurses and registered nurse have three years of pre-service training; comprehensive nurses that are expected to function fully as both nurses and midwives have four and one-half years of pre-

service training (Ibrahim et al., 2009). The registered nurse in Tanzania must have a minimum of three years or six semesters of education (TNMC, 2007). In the four targeted countries, the number of nurses pursuing university education has increased. Approximately 350 nurses with bachelors and masters degrees are a part of the Ugandan healthcare system and public hospitals (Nabirye, Brown, Pryor, & Maples, 2011; Thompson & Cechanowicz, 2007). The increasing number of nurses with degrees reflects the global trend toward university-based education that may enable nurses to contribute more fully in the policy arena (Edwards, 2008; MacDonald, Newburn-Cook, Allen, & Reutter, 2013; Munjanja et al., 2005).

In addition to pre-service education, continuing professional development (CPD) is a significant factor in maintaining workforce skills. Continuing nurse education (or as it is referred to commonly in Africa, CPD) is essential for keeping nursing practice current in the changing healthcare environment (Duff, Gardner, Osborne, 2014; Henderson & Winch, 2008). CPD has also been noted to improve work performance (Johnson, Hong, Groth, & Parker, 2011).

Nurse leaders and educators are challenged with assuring that nurses are able to participate in appropriate CPD to maintain professional nursing practice standards. An integrative literature review published in 2010 identified barriers to nurses obtaining CPD that included cost and difficulty getting time away from work due to staffing issues (McCarthy, Schweitzer, & Krassa, 2010). The review did not focus on Africa; however, a single study in South Africa also identified barriers to nurses obtaining CPD (Potgieter & Richards, (2010). The barriers to obtaining CPD and education challenges of nurses and other health professionals is an important area of consideration.

The Commission on Education of Health Professionals, an international organization comprised of 20 professional healthcare and education leaders from diverse countries, was

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launched in 2010. The Commission conclusions are that there is a need to educate healthcare providers in pre-service and through CPD in a way that better meets the increased demands on healthcare providers (Frenk, 2010; Frenk et al., 2010) called for new and transformative education that prepares healthcare workers that are able to strengthen health systems in an interdependent world, emphasizing the relationship between the health and education sectors (Frenk et al., 2010). Faculty in schools of nursing such as Makerere University, located in Kampala, Uganda, are assessing their nursing education programs to assure that they have the ability to meet national healthcare needs and to be consistent with official national health policy and goals (Kiguli et al., 2011; Munjanja et al., 2005). The WHO and Ministries of Health have increased their attention to the education of nurses to help expand healthcare access among high-need populations and communities (*MDG Africa,* 2008). The Nursing Council in Kenya has launched a strategic plan for 2012-2016, in part to monitor nursing education and practice, develop human resources, and to align the nursing profession with national service delivery priorities (NCK, 2012). Ethiopia is pursuing a Health Sector Development Plan that incorporates the expansion of the provision of primary care (Ethiopia Ministry of Health, 2011b).

Conversely, the same leaders of WHO and other global entities have reallocated funding from nurse education to the training of non-nursing persons, such as community health workers, thus decreasing the number of more highly educated members of the primary care team (Callaghan et al., 2010; Travis et al., 2004; Zachariah et al., 2009). Nurses being educated in SSA may not receive adequate preparation for the expanded role of task shifting. The need to educate more nurses and fund more nursing positions remains high. Currently in Uganda, only 51% of available nursing positions are filled due, in part, to a lack of money available to pay nurse salaries (Uganda Ministry of Health, 2010b). Kenya also has a mismatch between the

number of nurses educated and the number of government-funded nursing positions (Kenya Work Force, n.d.)

Nursing Regulation

Regulation of nursing practice, like nursing education, varies widely from country to country, includes vastly different methods of operationalization in some countries, and is non-existent in others (Nichols, DHL, Davis, & Richardson, 2009). Registration of nurses allows governmental agencies to ensure that nurses meet set standards within the country (Nichols et al.). Licensure requirements vary around the globe but generally mandate completing specified formal training and meeting established national requirements (Bärnighausen, 2009).

In Uganda, nursing registration requires completion of an approved course of education, appropriate documentation, exam results from the Uganda Nurse and Midwifery Examination Board, and an interview by The Uganda Nurse and Midwife Council (UNMC, n.d.). Following registration, a license number is assigned (UNMC, n.d.). License renewal, which must be done every three years, requires documentation of continuing education (Munjanja et al., 2005; Mbalinda, Nabirye, & Mbabali, 2012). A license to practice nursing is also required in Kenya and must be renewed every three years (Karani, Milimo, & Kuria, 2012). In Tanzania, there are registered nurses and enrolled nurses, who are licensed by the Tanzania Nurse and Midwifery Council (Mmari, 2012). In Ethiopia, nurses are educated at two, three or four years for entry to practice (Abduraham, 2011). Nurses in Ethiopia can be enrolled or comprehensive and continuing professional development and maintaining a professional portfolio is encouraged. Policy

Multiple issues must be considered by governments and institutions in SSA that engage in task shifting. The case for task shifting is compelling; officially and unofficially, its existence

permeates healthcare systems around the globe. While the evidence mounts supporting the effectiveness of task shifting, so grows the concern regarding the dearth of policies that support and protect the nurses who take on the expanded role (Buchan & Aiken, 2008; Miles, Seitio, & McGilvray, 2006). Task shifting, as a framework to address health workforce shortages, requires investment in the development of nurses and other healthcare providers (Larson, Bertozzi, & Piot, 2011; Medecins Sans Frontieres, 2007; Nichols et al.,2009) To nationally implement task shifting to better meet population health needs, while also supporting and protecting nurses, deliberate steps and specific policy development will be required (O'Brien et al., 2009).

While task-shifting increases the numbers of people who have access to healthcare (Huicho et al., 2008), the increase of providers other than physicians, nurses, and midwives has not been adequately explored from the nurses' perspective (Kinfu et al., 2009; Kendall, 2008; *World Health Organization, 2010*; World Health Organization, 2009). Many health-related tasks can be successfully delegated to members of the healthcare team with less training (Callaghan et al., 2010; Huicho et al., 2008). Determining which tasks are appropriate for delegation and how best to prepare and protect the nurse with an expanding role is uncertain (Babigumira et al., 2009; Dambisya & Matinhure, 2012; Medecins Sans Frontières, 2007; World Health Organization, 2008a).

The expanded role of the Ugandan nurse involved in task shifting is not explicitly protected by a nurse practice act nor are there task shifting-specific policies in place (Dambisya & Matinhure, 2012). Systems have to be developed that will assure the nurse who is functioning as a primary care provider has adequate knowledge and skills (Sanne et al., 2010; Stevens et al., 2009). The WHO (2008) Global Recommendation and Guidelines, with its definitions of specific competencies, is intended to develop "harmonized, standardized and competency-based training

that is needs-driven and accredited so that all health workers are equipped" (WHO, 2008, p 4). The need for monitoring outcomes and the presence of standardized and nationally recognized roles is also emphasized.

The nurse working in a position that involves task shifting needs to be officially recognized, supervised, and supported statutorily (O'Brien et al., 2009). It has been proposed that a country's ministry of health would simply need to approve nurse prescriptive authority to enable task shifting. However, without explicit polices or a clearly delineated scope of practice, the nurse is vulnerable to negative sequelae (Colvin et al., 2010; Miles et al., 2006). Even in the current policy void, task shifting is being implemented to move closer to reaching national and international health goals (MOH, 2010b, United Nations, n.d.).

<center>Task Shifting Outcomes</center>

System Cost and Effectiveness

A health system-wide adoption of task shifting has both policy and cost ramifications. Task shifting as a way to meet population health goals is viewed as cost effective. O'Brien (2009) used a simulation-based model to analyze savings in physician hours in Rwanda and, concluded that, for every hour of tasks shifted to nurses, there was a savings of 48 minutes of physician time. The focus of O'Brien's study was, in part, to consider how to address the physician shortage in the Rwanda healthcare system (O'Brien et al., 2009) and did not delve into the impact of task shifting on the nursing shortage in the country. Savings in healthcare provider salaries were studied in Uganda by Babigumira et al. (2009). These researchers projected a savings of $1.51 million US dollars if the routine care of HIV patients was shifted from physicians to nurses. The researchers noted that the theoretical savings assumes no change in the salary of the nurse (Babigumira et al., 2009).

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The cost of required nurse education and salary increases secondary to an increase in responsibility is routinely and inappropriately omitted from the discussions in the literature about the cost efficiency of task shifting. In addressing HRH shortages, the focus is repeatedly on shifting the physicians' role to the nurse with vague mention of nurses' tasks being delegated to a lesser skilled cadre of healthcare worker (Callaghan et al., 2010; Gow et al., 2011; World Health Organization, 2008c). A statement from the Democratic Nursing Organization of South Africa (DENOSA) includes both concerns in its policy statement on task shifting. "In re-crafting the provision of care, it is premised by the high quality competency and quality of care which is matched by acknowledged providers who are recognized, rewarded and respected for their expertise and commitment" (Stevens et al., 2009). Decreasing the per-patient cost of care is an important goal that does not negate the need to maintain and improve the both access to and quality of patient care.

Patient Effectiveness and Quality of Care

Task shifting as a way to improve population health has been studied by measuring a variety of outcomes. Primary care delivered by nurses has met international standards of care across studies. In Rwanda, a pilot study was done prior to the national adoption of task shifting for the provision of HIV care (Shumbusho et al., 2009). The researchers found that patients (n= 1,076) who had nurses as primary care providers were prescribed medications as indicated by national guidelines, The CD4 counts, used to track immune system response in HIV patients, were in an acceptable range, and the patients were retained in the healthcare system at an acceptable level (Shumbusho et al., 2009). Sanne et al. (2010), in a prospective, unblinded, randomized controlled study, provided doctors and nurses with education on HIV treatment and then compared nurse-care (n =404) to the doctor-care groups (n=408). The researchers elected to

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use a composite end point that measured multiple factors. The factors included loss to follow up, toxicity issues, consent withdrawn, virological failure, and patient satisfaction with treatment. The Kaplan-Meir analysis of time to composite failure showed nurse care to be non-inferior to the physician care group (log-rank p.0.42). No difference in mortality, viral failure, or immune recovery was observed between the nurse and physician care groups (Sanne et al., 2010). These results were similar to a study in Mozambique that concluded that task shifting to non-physician clinicians was a "viable long-term strategy" to meet the MDGs (Sherr et al., 2009).

Much of the research on task shifting has focused on the care of persons with HIV, but the outcomes of nurses delivering care in other patient populations has also been studied with favorable results. Researchers in Cameroon (Labhardt et al., 2010) studied nurses in the prevention, diagnosis, and treatment of diabetes and hypertension. The study included tests of nurses' knowledge immediately before training, after training, and two years later. The researchers also assessed the presence of working equipment in the clinical setting. The need to check for working equipment illustrates the complexity of conducting healthcare-related research in low resource settings. The researchers also collected data on patient assessments, the blood pressures, and blood glucose trends of persons diagnosed with hypertension and diabetes. The results found increased diagnosis of hypertension and diabetes and decreases in blood pressure and blood glucose trends of patients cared for by nurses. The researchers concluded that task shifting is an effective tool for providing care for the increasing number of chronic diseases in SSA (Labhardt et al., 2010). Mbuba and Newton (2009) favorably evaluated the nurse care of patients with epilepsy, and they concluded using nurses in the identification and treatment of epilepsy was a way to reach more people with the disorder. The evidence is clear that nurses can and do provide high quality primary care in a variety of diseases and disorders.

Nurse Effectiveness and Preparation

The nurse expected to engage in an expanded role secondary to task shifting must have adequate role preparation. Through a Cochrane systematic review, researchers evaluated the HIV care that patients received based on provider training and the volume of patients. They concluded that both were important to patient outcomes (Rackal et al., 2011). Rackal and colleagues called for an increase in research about the task shifting of HIV care from physicians to nurses. The nurse working in non-specialty, primary care in East Africa cares for a large volume of HIV patients, but may not have the education needed to consistently meet the recognized standard of care.

Hlahane, Greeff, and Plessis (2006) conducted a qualitative study about nurses' perception of their preparation in South Africa and found that the nurses were able to identify the skills that they lacked to provide appropriate primary care. The researchers described in detail the need for orientation, mentoring, support, and training for nurses that work in primary care clinics so that they are able to do the tasks that are most needed (Hlahane et al., 2006). In a stratified random sample of 44 healthcare facilities in Uganda that were approved to provide antiretroviral medication by the Ministry of Health, Ibrahim et al. (2009) found that 62% of people who prescribed antiretroviral therapy were not physicians. In the same study, 54% of prescribing nurses had received training in the initiation of ART as opposed to 71% of the physicians. Interestingly, the percentage of providers who received training in ART maintenance was much lower, with 27% of physicians lacking training and 50% of nurses. More nurses (35%) than physicians (7%) identified their level of knowledge about ART to be lower than "good" in the study (Ibrahim, 2009).

In addition, the need to study ways to provide clinical education for nurses involved in task shifting (Sanne et al., 2010), clinical education of nurses involved in task shifting must include more than technical skills (Birhanu, Assefa, Woldie, & Morankar, 2010). An understanding of the nursing scope of practice, the current work environment, and the healthcare team may need to be incorporated into task shifting preparation (Sanne et al., 2010).

Healthcare team dynamics will continue to warrant consideration, and definitions of the roles and responsibilities of each provider will need to be clarified as job demands change (Callaghan et al., 2010; Shumbusho et al., 2009; Yakam & Gruénais, 2009). Members of the Global Health Workforce Alliance (2008) identify the need for expanded healthcare, but emphasize utilization of community health workers rather than increasing the number of nurses educated. The increase in paid health workers, rather than nurses, could be viewed as undermining rather than extending the nurses' provision of care. Operationalizing task shifting must include structuring physician and clinical support of the nurse who has assumed an expanded role (Sanne et al., 2010). The ongoing development of all healthcare team members to achieve the best quality patient care will also be required (Shumbusho, et al., 2009).

Conclusion

The statistics from the WHO clearly illustrate a crisis-level need to increase access to healthcare across East Africa. The provision of basic healthcare will need to be adapted and adjusted so that the health-related MDGs can be met. A preponderance of evidence supports the premise that task shifting is one way to increase the number of people that have access to targeted treatment such as ART. The evidence is increasing that nurse-provided care meets the WHO standards. Nurses require fewer years of education than physicians which, in task shifting environments, allows for the more rapid expansion of services to meet population health needs.

The nurse is paid less than physicians, which allows for a significant reduction in per person cost that could translate fiscally into an increased number of people who can receive care.

Limitations of task shifting include the lack of a clear policy allowing nurses across settings to statutorily function in the primary care provider role. The nurse may be protected by a clinic-specific policy, but to be fully protected, clear regulations should be instituted. Policy makers, when enacting national regulation, must consider licensure and certification for the nurse functioning in an expanded role. The national entities that govern nursing practice should address the preparation of the nurse engaged in task shifting. The healthcare team should be strengthened with roles clearly delineated and oversight expectations detailed.

Several gaps in the knowledge have been identified related to nurses and task shifting in East Africa. In an absolute shortage of all healthcare providers, a better understanding of the provision of nursing care is needed. A clearly defined and delineated scope of practice is increasingly important as nurses are expected to take on expanded roles. A nationally accepted and protected scope of practice for nurses could be used to inform decisions about task shifting. Gaps in the knowledge include the best way to educate nurses for the prioritized tasks of an expanded role.

Chapter 3

Methods and Procedures

Nurses are able to participate more effectively in meeting population health needs when they are appropriately prepared to take on the expanded roles required in task shifting. Gaps in knowledge about the preparation of nurses for task shifting have been identified. To determine what was currently successful in pre-service, continuing professional development, and on-the-job training, the perceptions of nurse leaders from selected countries were the focus of the proposed study. Due to their nursing experience, familiarity with the profession, and professional expertise, nurse leaders were able to provide insight into current preparation practices for task shifting in Ethiopia, Kenya, Tanzania, and Uganda. The information may be relevant to other regions of the Africa and the world. Interviewing nurse leaders that had direct experience with, and knowledge of, the issues related to task shifting was used to gather rich and relevant information. The increased understanding of task shifting preparation from the nurse leader perspective may facilitate addressing a critical gap in knowledge about how nurses are currently being prepared and to identify best practices. In this chapter, the research design including the setting and sample, procedures for data collection, ethical considerations, and data analysis are discussed.

Research Design

The study was an exploratory descriptive qualitative study of nurse leaders' perceptions of nurse preparation for task shifting in Ethiopia, Kenya, Tanzania, and Uganda. An interview protocol was used to conduct a series of interviews to gain information about pre-service, continuing professional development, and on-the-job training. The information was used to identify best practices in nurse preparation for the expanded roles of task shifting. Semi-formal

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guided interviews of the nurse leaders were conducted in person and via telephone and web-based communication.

An exploratory descriptive interview methodology was selected to build on information available in the literature and the researchers' findings from focus group study on task shifting conducted in Uganda in July 2012. Personal interviews enabled in-depth exploration of the topic and elicited rich, comprehensive information related to the current nurse preparation from the perspective of the targeted country-specific nurse leaders (Holstein & Gubrium, 1995; Munhall, 2012). According to Sandelowski (2000), qualitative descriptive studies are a type of naturalistic inquiry that provides a venue for the comprehensive summary of phenomena, such as preparation for task shifting. Qualitative descriptive study allows for the descriptively valid report that is focused, accurate, and representative (Sandelowski, 2000).

The facets of the NIC theory (Covell, 2008, 2011) were used to guide the development of the interview protocol. The preparation of nurses for task shifting was considered in the context of contributing to each country's nursing human capital and nursing structural capital. The interview questions were developed, participant responses were analyzed, and themes compared to the concepts of the NIC theory.

<div align="center">Sample</div>

A purposive sampling of nurse leaders in Ethiopia, Kenya, Uganda and Tanzania was used. Diverse definitions and types of purposive sampling are used in qualitative studies, but the general principle was that the persons interviewed were selected based on specific criteria relevant to the purpose of the study (Guest, Bunce, & Johnson, 2006). The primary purpose of the sampling criteria, consistent with qualitative research, was the selection of participants that were rich sources of information (Grove, Burns, & Gray, 2012; Munhall, 2012; Sandelowski,

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2000). Initial recruitment of nurses was focused on those that were in attendance at the International Council of Nurses (ICN) 2013 Quadrennial Conference. Familiarity with nursing preparation and task shifting made purposive sampling an appropriate method for this study and appropriate selection of participants increased credibility or the study (Coyne, 2008; Devers & Frankel, 2000; Graneheim & Lundman, 2004). A snowball sampling to identify additional participants was effectively used to obtain saturation of themes (Grove, Burns, & Gray, 2012; Munhall, 2012). The sample frame consisted of English-speaking nurse leaders from the selected target countries. "Leader" was defined as persons that worked in clinical facilities, academic settings, or government agencies in leadership roles. "Nurse" was defined as the healthcare providers licensed to practice and use the title of nurse in their country of origin. The nurse leaders' originated from and worked in the targeted countries of Ethiopia, Kenya, Uganda, or Tanzania.

The number of participant interviews needed was multifactorially determined; Study scope, design, homogeneity of participants and the quality of data obtained effect the ideal sample size (Morse, 2000). The sample was determined to be large enough when conceptual saturation was established. Saturation was defined as the redundancy of answers in response to interview questions that resulted in no new information being obtained (Devers & Frankel, 2000; Morse, 2000; Munhall, 2012). Guest, Bunce, and Johnson (2006) found in a multinational African study that 80% of codes were identified after the sixth interview and, after the twelfth interview, no new themes were added. They noted that no new themes were found when interviews from the second country were analyzed (Guest et al., 2006). The minimum number of participants for this study was set as nine with the maximum number of participants set at 25. In this study, saturation was reached by the 14th interview.

The scope of the interviews focused on nurses and their preparation for task shifting, a specific and narrow topic that was expected and found to be clear to participants. The clear and familiar topic with a specific focus may have contributed to early thematic saturation. The participants were all nurse leaders, all from African countries, and the expectation of the researcher that the quality of answers would be generally high was met.

Setting

Initial interviews, as logistically and financially feasible, were conducted in a face to face format in a quiet environment at the site of the ICN 2013 Quadrennial Conference. No follow up interviews were needed from the three nurse leaders interviewed during the ICN conference. Participants not in attendance at the ICN 2013 Quadrennial Conference were interviewed by telephone or web based communication as mutually agreed upon by the participant and researcher.

Data Collection Method

A semi-structured approach to the interview was used to increase consistency of information gathered between participants, and allow for a flexible and active interview (Appendix C) (Devers & Frankel, 2000; Holstein & Gubrium, 1995; Turner, 2010). The interview protocol was grounded in existing published information (Brod, Tesler, & Christensen, 2009), researcher familiarity with the topic, and findings of a focus group conducted by Spies and Gray on the topic of task shifting (2012). Open-ended questions allowed for appropriate exploration of the topic and provided opportunities for full participant contribution (Turner, 2010). Study questions included both concrete questions, such as demographic information, and thematic questions that allowed for concept exploration (Johnson, Dunlap, & Benoit, 2010). Thematic questions were developed with several possible prompts to elicit richer information

(Holstein & Gubrium, 1995; Johnson et al., 2010; Munhall, 2012; Turner, 2010). The initial interview protocol was reviewed for relevance and understandability by expert nurses with leadership skills, research expertise, and personal experience in East Africa and revised based on their input. The qualitative interview was viewed as an iterative process which led to the honing of the prompts used in subsequent interviews, based on analysis and reflection on each interview as it was completed (Brod et al., 2009).

A saturation grid was used to determine when an adequate number of interviews had been conducted (Brod et al., 2009). The grid helped identify new themes as they arose from each question for each interviews, and served as a record of when saturation was achieved (Appendix D).

Procedure

After Committee and Institutional Review Board approval, potential participants were identified through networking methods. Interviews to be scheduled during the ICN conference were sought and arranged through e-mail and telephone after employing a variety of networking activities. Potential participants were contacted four to six weeks prior to the ICN Congress via e-mail. Introductory e-mails from colleagues were used strategically to increase credibility and improve the response rate (Devers & Frankel, 2000). Introductions were sought from known contacts in Kenya, Ethiopia and Uganda. Introductions were sought from colleagues who worked in other parts of Africa. Nurses from targeted countries who were presenting at the International Council of Nurses Quadrennial conference were sent introductory e-mails and requests for interviews. Directors for JHPIEGO, a healthcare related organization that works prominently in East Africa, were expected to present at the conference and were also contacted. Johanna Briggs Institute country directors were sent e-mails inviting them to participate in the study. Nurse

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registrars from Kenya, Ethiopia, Uganda and Tanzania were also successfully contacted by e-mail.

Arranging initial interviews typically took multiple e-mails and required tenacity. A record was created to track when initial and follow up contacts were made. After the initial round of interviews, the most fruitful source for participants was introductions from the nurse leaders that had been interviewed. Only three interviews were conducted at the ICN conference; however, the subsequent snowball sampling produced qualified candidates for subsequent interviews.

Subjects were identified based on their involvement in the nursing profession, participation at the conference, and recommendation of colleagues. Male and female English-speaking nurse leaders were eligible to participate in the study. Meetings were scheduled at a mutually convenient time and location during the conference or a time set for phone and/or web based communication interviews. Snowball sampling was implemented during the ICN 2013 Quadrennial Conference to identify additional participants and interviews arranged to achieve thematic saturation.

After consent was obtained, each participant was asked to complete a brief demographic survey (Appendix B). When the survey was complete, the nurse participants were interviewed in a semi-structured manner about educational preparation for task shifting. All interviews were conducted by the primary investigator (PI). All conversations were in English and recorded with a digital electronic portable device. Immediately after the interview, the PI listened to each recording in its entirety, created a related field note for the face-to-face interviews, saved the digital and field note file to a password-protected file on the PI's laptop, and uploaded the file into a protected central data repository.

Following each interview, refinement of the interview protocol was considered. Initial impressions of themes were noted in the saturation grid. The inteview prompts rather than the major questions were changed to improve interview quality and topic exploration. To maintain credibility and rigor, questions were not altered. The interview recordings were transcribed by a professional transcription service. The transcript of each interview was reviewed by the researcher while listening to the recording. The professional transcribed interviews required a significant amount of editing by the researcher. The initial transcripts contained many errors possibly due to the combination of poor recording quality, nursing specific terminology, and the accents of the interviewees. Correcting the transcripts required listening to sections of each recording multiple times to revise areas that were incomplete or inaccurate in the professional transcripts. The unexpected benefit from the less-than-ideal quality of the transcripts was immersion in the data and reflection on possible themes. The edited and refined transcripts were uploaded into the QSR International's NVivo 10 software, 2012.

To increase rigor, as the final round of coding was underway, an experienced qualitative researcher with international experience generously agreed to conduct a thematic analysis of two of the transcripts. The transcripts provided the second analyzer were strategically selected. One was from an educator from Uganda that was one of the later interviews. The other transcript was from an early interview with a Kenyan who worked in a high ranking government position. This process provided validation that the ongoing data analysis was revealing themes that were consistent with the finding of a seasoned researcher. The second reader also honed in on several ideas that triggered additional consideration and researcher insight.

The demographic surveys were kept in a locked drawer in the PI's office. Recorded interviews were kept in a password protected file on the PI's private laptop. Transcriptions of the interviews were kept in a locked drawer in the PI's office.

Ethical Considerations

Human Subjects Protections

Human subjects' protection was a priority in this study. Institutional Review Board (IRB) approval was obtained from Baylor University and the University of Texas at Arlington. Scrutiny by multiple bodies concerned with human subjects' protection provided safeguards and helped identify risks unforeseen by the researcher.

There were minimal risks to study participants. As Gliner et al. (2009) suggests, establishing rapport with each study participant was a priority. Participants were provided a detailed explanation of the study written at an appropriate reading level and given adequate time to peruse the approved informed consent (Appendix A). Privacy in all responses and confidentiality, rather than anonymity, were scrupulously maintained. The participants were assured that results of all demographic surveys, recordings and subsequent transcription of interviews would not be shared in any fashion that could be linked to specific study participants (Gliner, Morgan, & Leech, 2009).

If in the unlikely event it becomes necessary for the IRB to review the research records, both of the universities will protect the confidentiality of those records to the extent permitted by law. The research records will not be released without express consent of nurse participants, unless required by law or a court order. The data resulting from participation may be made available to other researchers in the future for research purposes not detailed within this consent form. In these cases, the data will contain no identifying information that could associate a specific

particpant with it, or with participation in the study. If the results of this study are published or presented at scientific meetings, particpant identity will not be disclosed.

Risks, in addition to loss of privacy, included that the study participants may have become tired while responding to questions. If the study participants became tired at any point in the interview, they were be able to stop. If they became uncomfortable with the questions of the interview, they had the option of not answering a question and stopping the interview or not answering the question and proceding with the interview. None of the participants chose to stop the interview, but they could have done so at any time without penalty or loss of benefits.

Participation of the nurse leaders in the study had actual and potential benefits. For the face-to-face interviews, culturally appropriate refreshments are normally expected as a means to begin the social engagement (Holstein & Gubrium, 1995). The ICN Quadrennial conference setting negated the opportunity to provide refreshments. Small gifts of appreciation valued at approximately $10 USD were provided to the face-to-face interview participants at the conclusion of the interview. No participant elected to terminate the interview prior to completion. The lack of significant compensation eliminated participation payment as motivation, which would have compromised the principle of voluntariness (Gliner et al., 2009). No gifts were provided for the telephone and web-based interview participants.

Another benefit of participation was that the participants were informed that that the study results would be shared with them. The study was designed to fill a gap in the knowledge of nurse leaders' perceptions of the preparation of nurses for task shifting. The information may be used to benefit the nurses who work in environments of scarcity and, as a result, potentially benefit those people in their care by contributing to increased nursing intellectual capital and nurse capacity.

The benefits may have also included personal satisfaction for having contributed to the exploration of task shifting in East Africa and knowing the information provided was intended to improve nurses' preparation and practice. Additionally, improved nursing care could be an outcome due to an increased understanding of preparation for task shifting from the nurses' perspective.

<div align="center">Data Analyses</div>

Qualitative analysis was a non-linear process and evolved organically as research findings were scrutinized (Elo & Kyngäs, 2008). Final transcripts were read and reread by the PI to maximize familiarity and begin to identify themes and subthemes (Graneheim & Lundman, 2004; Petty, Thomson, & Stew, 2012). The themes that were generated by analysis of transcripts were systematically applied in subsequent readings by assigning the representative codes (Graneheim & Lundman, 2004; Sandelowski, 2000). Manifest themes, the obvious topics of the interviews, rather than latent themes were emphasized due to the direct nature of the information being sought (Elo & Kyngäs, 2008; Graneheim & Lundman, 2004). Themes, sub-themes, and patterns were identified and the QSR International's NVivo 10 software was used to provide the organization of the codes and facilitate searching for similarities across interviews (Graneheim & Lundman, 2004). The codes assigned were analyzed in depth and the researcher considered patterns and relatedness. Using the software, several memos were written as latent themes were gleaned that impacted the focus of the interpretation of data from the study (Petty et al., 2012). The exploratory descriptive methodology selected for the study typically requires less assignment of meaning and writing of memos than other qualitative approaches; in this study memos were written several times as deemed necessary during analysis of the interviews (Sandelowski, 2000).

Relevant concepts from the nursing intellectual capital theory were used as the analysis

framework (Elo & Kyngäs, 2008). Interview analysis was used to distill the large quantity of

information obtained from the interviews into themes, sub-themes and patterns by linking themes

from the interviews to the relevant NIC concepts (Elo & Kyngäs, 2008; Graneheim & Lundman,

2004). The themes identified were related to aspects of the task shifting model (Figure 2).

Sandelowski posited "Theory in qualitative research may be employed in the service of

accurately interpreting, and evocatively and imaginatively representing data" (Sandelowski,

2007, p. #). The task shifting model was revised based on the findings of the study.

Descriptive statistics were calculated from the demographic survey information, data

results from each country, and for the overall group. Similarities and differences about nurse

preparation via formal education, continuing professional development and on-the-job training in

Ethiopia, Kenya, Uganda, and Tanzania were analyzed, contrasted, and compared. Nurse leader

perceptions and resultant themes about what are best practices were considered country by

country and with inclusion of shared responses, ideas, and possible resultant themes.

Rigor and credibility in qualitative research has been a topic of debate among researchers

for more than two decades. Caelli, Ray, and Mill (2008) note the importance of congruence

needed between ascertaining rigor and the research approach. There is not one universally

applicable process for verification with appropriate steps that can be taken to assure high quality

findings across all types of qualitative research (Brod et al., 2009; Caelli, Ray, & Mill, 2008; Elo

& Kyngäs, 2008; Graneheim & Lundman, 2004; Munhall, 2012; Petty et al., 2012). The

quantitative terms validity and reliability are debated relative to qualitative research. The

attributes are important in all research, but establishing their qualitative counterpart has been

challenging (Sandelowski & Barroso, 2008). Caelli et al. (2008) argue that key components of a

research report include clear articulation of the theoretical position of the researcher, the implementation of the method, what strategies are used to establish ongoing rigor and how analysis was carried out. A common approach involves the trustworthiness of the research. Trustworthiness, although evaluated in qualitative research in a myriad of ways, centers on credibility, dependabilty and tranferability (Graneheim & Lundman, 2004).

Credibility was enhanced in this study by the selection of participants that provided high quality, targeted information and by obtaining adequate information through concept saturation to answer the explore the research question. Crediblity in the data analysis was increased by the careful assignment of codes (Graneheim & Lundman, 2004). By providing details about the data collection and analysis, transferability was enhanced. Triangulation was used as a tool by the researcher to assure that there was consistency between information found between the interviews, with outside experts, and the available literature. The changing nature of qualitative information over time and between researchers can challenge the dependability of a study. To ameleorate this challenge, a clear audit trail was maintained so that the rationale for the research decisions will be clear to other researchers in the future (Graneheim & Lundman, 2004; Petty et al., 2012).

Interviews were transcribed verbatim and electronic copies are a part of the audit trail. The audit trail included a saturation grid that was completed as transcripts were sequentially considered. The saturation grid provided verificaton that thematic saturation was achieved and that theme exploration was continued (Brod et al., 2009). Field notes were recorded as soon as possible after each interview to note body language, non-verbal cues, and other potentially relevant observations. The field notes were kept in a file as a part of the audit trail. Copies of all correspondence were kept as a portion of the audit trail.

The resulting product of the study was descriptive information about nurse leaders'

perception of nurses' preparation in four countries in East Africa. The final analysis of data

included consideration of the most prevalent to least prevalent themes and provided comparison

information between countries about nurse preparation for task shifting (Sandelowski, 2000).

The information contained insights into how nurses in East Africa were prepared to take on an

expanded role in task shifting to meet population health needs. Insight may come from the

consideration of how contributions to nursing capital are made and supported by pre-service,

continuing professional development, and on-the-job training.

Delimitations

The participants were recruited from four countries in Africa in which nurses provide

care in a task shifting model. Selecting nurses that meet the criteria from countries that use task

shifting ensured that relevant answers to the research questions will be gained during the

interviews.

Conclusion

This chapter presented information about the research design and provided support for

the qualitative descriptive method. The selection of nurse leaders in attendance at the ICN

Congress and ethical considerations were detailed. The maintenance of rigor and credibility and

data analysis was explained. The chapter outlined in detail the process that was taken to gain new

knowledge about nurses' preparation for task shifting from the perception of nurse leaders.

Chapter 4

Analysis of an Exploratory Descriptive Study on Task Shifting

Central to the provision of healthcare in East Africa is the nurse. The WHO has affirmed task shifting as a key component in delivering healthcare to larger sectors of the population. Nurses in Tanzania, Ethiopia, Kenya, and Uganda are taking on tasks that traditionally were the responsibility of other providers. The published literature confirms that this practice is increasing access to care and improving health. There is, however, a paucity of research about nurses' perceptions of their preparation for task shifting and how best to educate the nurse for the expanded role. This study was conducted to explore task shifting through structured interviews with nursing leaders in four East African countries. The questions focused on what the nurse leaders' considered to be best practice to prepare nurses to engage in task shifting. In this chapter the analysis of the study findings is presented. The predominant themes that emerged during the interviews will be explicated using examples of the nurse leaders' responses to questions about task shifting in their respective countries. The defined themes will be used to answer the research questions.

Sample Characteristics

The fourteen interviews, which averaged thirty-five minutes in duration, were conducted in person (3), via Skype (3) and over the telephone (9). The participants were primarily females prepared at the master's level. The nurse leaders' education and work experience varied (see table 4-1). Because of their leadership roles, the participants are well known to the healthcare communities in their respective countries. As a result, participant characteristics are reported by country so that individual participants are less likely to be identifiable.

Table 4-1 Demographics of Study Participants

Country	Sex	Education	Occupation
Ethiopia (n=2)	Males 100%	1 BSN / 1 MSN	Education
Kenya (n=3)	Female 100%	3 Masters	Education Government Management
Tanzania (n=3)	Female 100%	3 Masters	Education Government Management
Uganda (n=6)	Female 50% Male 50%	1 BSN 4 Masters 1 PhD	Education Government Management
Total	9 (64 %) female 5 (36%) male	2BSN 11 MSN 1 PhD	

Theme Exploration

The study interviews elucidated a number of aspects of task shifting that are a part of the work of the East African nurse. Details about task shifting became clearer as the study participants provided examples of the work done by nurses in Kenya, Ethiopia, Uganda, and Tanzania. Analysis of nurse leaders' perceptions of their role in the provision of healthcare in the diverse environments of task shifting brought forth many themes. The following section will define the themes and sub-themes gleaned from the interviews. Observations about how certain themes fit into the NIC theoretical framework will be included. The subsequent sections will answer the research questions. Four overarching themes were identified and they were "*Nurses' Burden", "Patient perception", "Regulatory Needs"* and *"Nurse Preparation".*

Nurses' Burden

The nurses' burden is an overarching theme named to reflect the realities of nursing in East Africa. Sub-themes of the nurses' burden include those that contribute to the need for task

shifting and the complexity of task shifting implementation. This major theme includes the sub-themes of *"Few on the Ground"* and *"Heavily Laden"*.

Table 4-2 Nurses' Burden Themes, Sub-themes and Patterns

Overarching Theme	Sub-Theme	Pattern
Nurses' Burden	Few on the ground	Standing in the gap
		Shifting away
	Heavily laden	Nurses' work goes undone
		Inadequacy of essentials

Few on the ground

It is the lack of healthcare providers that drives the need for task shifting. One participant identified this as the "*global deficit of midwives, nurses, and doctors*" (#5, Kenya). "Few on the ground" was the term used by several nurse leaders when they were speaking about the HRH shortage. The numbers of nurses are limited, and yet they remain the most ubiquitous provider of healthcare across low resource settings. "*You're the physician, you're the lab, you're everything. Because you're alone. People are few on the ground.*" (Nurse Leader 8, Uganda).

This theme highlights the demands that task shifting disproportionately places on nurses. Two patterns merged related to few on the ground; *standing in the gap* and *shifting away*.

Standing in the gap. The nurse leaders repeatedly brought to light that nurses were expected to fill the role of all healthcare providers. This pattern was termed *standing in the gap*. It is not that nurses are asked to take on only additional nursing responsibilities; it is that they are asked to take on the work of many cadres of healthcare workers. "*Most of the work in the hospital, really, is now being done – in all health facilities – is being done by the nurses. In some health facilities, the nurses, – they're on their own so they do all the work*" (Nurse Leader 3, Uganda). "*Whenever a center has a shortage of staff, they think the nurses should fill the gap how … the nurse is in the lab, the nurse is in the store, the nurse is in the pharmacy, the nurse is*

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in theatre, and so I wonder … they don't receive adequate training as a nurse one is able to deliver care" (Nurse Leader 6, Tanzania). The nurse leaders observed that when other providers were not present, it was assumed that the nurse would step in to provide care.

> *When we ask a doctor to come and take on task shifting, will he accept? … No, the answer is no … other health professionals are overburdening our people, our nurses which I think would be unfair. Can you imagine talking about task shifting and a doctor making a bed* (Nurse Leader 14, Uganda)?

Standing in the gap highlights the tasks that nurses are doing in environments of task shifting, both officially and unofficially, and this theme spanned all interviews. The nurse leaders conveyed that it was a widespread expectation that nurses take on additional responsibilities. The WHO task shifting plan includes the nurse shifting tasks to other providers, but the nurse leaders indicated that this was not consistently implemented.

Shifting away. The second pattern of few on the ground, shifting away, underscores that the expectation of taking on expanded roles is not exclusive to nurses. The pattern incorporates both the expressed concerns that there is often no one available for the nurse to shift tasks to and that those taking on nurses' tasks are not always appropriately prepared. "*What happens is that for us, we don't have anyone below us whom we will say, let's shift this task*" (Nurse Leader 8, Uganda).

> *When we hear the word task shifting in Kenya … our hair stands out straight. The word has been used around the world, especially in the developing world to promote that you are going to use very low qualified cadres, qualified people would be used to take care of the clients or patient* (Nurse Leader 5, Kenya).

Several nurse leaders expressed concern for the patients related to using other cadres to provide nursing care. "*… effects of task-shifting, … other people taking on the roles of nurses, especially auxiliary nurses, – auxiliary workers taking on the role of nurses, which has a lot of detrimental effects on the patients who have had medical errors made*" (Nurse Leader 3, Uganda).

In the context of the NIC theory, the theme of few on the ground can be linked to a lack of investment in funded nursing positions in hospitals and clinics across East Africa and the subsequent inadequate patient to nurse ratio (World Health Organization, 2008; World Health Organization, 2013). The cause of the HRH shortage is complex but it is a driving force of task shifting and may be the impetus to address policy level obstacles related to task shifting.

Few on the ground sub-themes of *standing in the gap* and *shifting away* led to a concurrent observation that due to the volume of doing other peoples work, the nurses were often unable to adequately complete their own work. This emerged as the theme *heavily laden,* a facet of the nurses burden that will be defined with the patterns *nurses' work goes undone* and *inadequacy of essentials.*

Heavily Laden

The nurse working in environments of HRH shortage assumes the role of many healthcare workers and has few people to whom she can shift tasks. This leads to some of the work for which the nurse is prepared going undone due to the new tasks. "*Because they are so heavily laden with this workload of other people, that nursing care is not actually not being very well implemented*" (#3, Uganda).

Nurses' work goes undone. The study participants observed that as nurses are expected to take on other peoples' work, the nursing work often goes undone or undocumented. "*They tend to focus more on the new tasks they have been assigned to than their original task as they're employed.*" (Nurse Leader 7, Uganda). "*My concern is that when they do task shifting, some of the activities, some of the competencies is it is expected from nurses. We shift from the nurses' profession…we can't make a person, a single person to do many tasks*" (Nurse Leader 11, Ethiopia). "*Whenever a center has a shortage of staff, they think the nurses should fill the gap*

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how much. She is doing more because she is a nurse. It interferes with the efficiency of the

nurse." (Nurse Leader 6, Tanzania). Nurses that are expected to take on additional tasks may not

have time to complete their nursing responsibilities. "*The nurse has … her tasks but on top of*

that, they are more … sometimes you end up not being effective, not doing some of your issues,

like tasks that you're supposed to do because you're busy helping out someone." (Nurse Leader

8, Uganda). In addition to the potential lack of time available to complete nursing tasks is the

lack of supplies and equipment to facilitate the nurse completing nursing work.

  Inadequacy of Essentials. Several nurse leaders acknowledged a lack of supplies as

contributing to the difficulty for the nurse engaged in the role of task shifting. "*On the ground,*

there are other things that make the situation difficult. For example, you find there is inadequate

of essential equipment and supplies" (Nurse Leader 12, Tanzania). *"However, in terms of work*

environment, it used to be better than what it is now. There were actually sufficient or you know

adequate supplies and equipment, unlike today. So … the environment is not supportive" (Nurse

Leader 6, Tanzania). This theme, while possibly common to all, was specifically articulated only

by the nurse leaders in Tanzania.

  Essentials needed included both funding and technical support. "*Given the funds and the*

technical assistance required … after a few training years, the nurses that do go out could have

all the lifesaving skills already" (Nurse Leader 12, Tanzania). Funding, technical support, and

assistance would, using the NIC model, be examples of investments that the Ministry of Health

or district hospital could make to support nurses undertaking task shifting.

Patient Perceptions

The second major theme was that of patient perceptions. This was composed of the

themes *nurses' gentle touch, daktari / musawa,* and *for the benefit of our patients.* These themes

explore the nurse leaders understanding of the East African patient perspectives.

Table 4-3 Patient Perceptions Themes and Sub-themes

Overarching Theme	Sub-Theme	Pattern
Patient Perceptions	Nurses' gentle touch	
	Daktari / Musawa	
	For the benefit of our patients	

Nurses' gentle touch

The theme entitled nurses gentle touch highlights the nurse leaders' consistent

perspective that patients appreciated the work nurses do. "*That is why they are surviving, in our*

country, feeling good. That's why they are surviving in Ethiopia; eighty percent of healthcare is

covered by nurses in Ethiopia … because most of the job is done by nurses." and "*Because they*

know the role of the nurse, they love the role of the nurse." (Nurse Leader 11, Ethiopia).

> *And men are happy with female circumcisers. They say they are soft; they are gentle and*
> *all those things. And I think when nurses take the roles and the responsibilities when*
> *there is adequate support, then they do it – they do it well. So the patients are happy with*
> *what they are doing.* (Nurse Leader 2, Kenya).

The theme nurses' gentle touch also conveyed the pride the nurses had in that they were

meeting healthcare needs. "*It gives them a kind of – my own observation shows that -- it gives*

them a kind of pride and a satisfaction." (Nurse Leader 7, Uganda).

The nurse leaders frequently identified a preference for the care provided by nurses.

"T*hey always appreciate the work that the nurses do, especially when they know that it's not*

supposed to be the work of this nurse, especially when the nurse does it well, they do appreciate it very much." (Nurse Leader 7, Uganda).

The skills and knowledge that the nurses possess reflect the NIC component of human capital. Examples were given of patient satisfaction with nursing care but it was also noted that the patient does not always differentiate what type of provider is giving them care.

Daktari / Musawo

Nurses have long provided the majority of healthcare which was manifest in statements such as "*Otherwise for patients it has been business as usual. So long as there is a nurse on duty. That nurse has always been their doctor, the only doctor they know and it is fine.*" (Nurse Leader 5, Kenya). This theme continued in the way the nurse leaders identified the patients' perceptions of their healthcare providers. "*In Kenya, we have a common tongue, patients call everyone daktari. Daktari means doctor – they may not differentiate.*" (Nurse Leader 1, Kenya) and "*There's one word for everybody who is a health worker – Musaw.*" (Nurse Leader 9, Uganda).

This theme was linked to an observation by several nurse leaders that the patients are not sophisticated in their understanding of the healthcare system. The nurse leaders noted that, except in Kenya, the patients are not empowered to exercise rights in seeking care options or registering complaints. The nurse leaders shared that in Kenya there was a relatively recent constitutional effort to provide protection to patients in the Kenyan healthcare system.

For the benefit of our patients

The theme that emerged titled "for the benefit of our patients" clarified that patients benefited from task shifting. In spite of fragmented education and overwhelming numbers of

patients, the nurse leaders recognized that the additional roles they endeavored to take on improved patient care and population health.

The response from nurse leaders to the interview question, "How do nurses being engaged in task shifting contribute to patients' health?" was answered positively across all interviews.

> *At least these people are getting quality care in a few areas where they have all these nurses that have updated themselves* [Attended CPD]. *And you know, we are seeing nice outcomes, like in maternal mortality i Tanzania I do see, not a great number but there is a reduction. And also for infant mortality way down.*" (Nurse Leader 12, Tanzania).

"*The congestion in the wards is relieved … so it has some impact on the healthcare.*" (Nurse Leader 2, Kenya).

The benefit to population health secondary to task shifting was evident to nurse leaders in the four countries studied. The need for task shifting related policies and clearly defined scope of practice was an important theme and was also consistently found across interviews.

Regulatory Need

Regulatory need is the third overarching theme that the nurse leaders identified. The nurse leaders noted a lack of policies in place to provide clear guidance and protection for the nurse. A need for a clearly defined scope of practice, a clear definition of task shifting, and the need for protective policy, *if mistakes occur* were all identified related to regulatory need. Additional subthemes of regulatory issues included *deployment imbalance and fair compensation.* All of the nurse leaders resided in countries where task shifting was occurring either officially or unofficially, and each also identified areas that needed to be developed or improved if the nurse was to safely engage in task shifting.

> *I'm saying planning and documentation is quite important and from the policy level to really show that, 'okay, we are shifting these tasks the nurse or midwife' will be able to do these so that it is within the scope of practice … and this planning can come from*

policy level and it can also involve regulatory bodies to work out this so that it is known.
(Nurse leader 8, Uganda).

Table 4-4 Regulatory Needs Themes and Sub-themes

Overarching Theme	Sub-Theme	Pattern
Regulatory Needs	Scope of Practice	
	Task Shifting Defined	
	If Mistakes Occur	
	Deployment Imbalance	
	Fair Compensation	

The environment in which the nurse in East Africa works is largely shaped by

government and institutional policies. Policy and regulation is the mechanism in which

governments can support nurses engaged in task shifting. Each of the sub-themes in regulatory

need reflect areas where NIC investment is needed.

Scope of Practice

Working according to the "situation" rather than according to the "scope of practice" for

which nurses are prepared contributes to the frustration voiced by many.

> *Whereby the nurses have now started working according to situation, not according to*
> *the scope of work. That is the difference. They are now coping with the situation. When*
> *they are required to prescribe, they prescribe. When they are required to do minor*
> *operations, they do minor operations, you know like stitching of a wound.* (Nurse Leader
> 12, Tanzania).

The nurse leaders repeatedly referred to a need for a more clear description of routine

nursing responsibilities that they called the nurses' scope of practice. "*So what I think is first to*

expand our scope of practice, our regulator should know that we are doing that, and to allow us

to do it … to give us some capacity that you can do this and this and this." (Nurse Leader 13,

Tanzania).

The lack of documentation, noted by several nurse leaders, was also identified as

contributing to the lack of support for nurses in the form of a clearly defined scope of practice

and regulation that protects and supports the nurse when new tasks are shifted. "*Most of these tasks are done, but there's nothing documented within the ministry, that this is exactly what we are shifting and what does it mean on the normal work schedule for a nurse ... and if they do well ... then it will continue being done like that.*" (Nurse Leader 8, Uganda). By defining what was expected from the nurse in their assigned role, the nurse could then more assuredly be prepared for standard duty. Having evidence, in the form of documentation, of the work that is actually being done by the nurse could help define the routine scope of practice for the nurse. Task shifting, in addition to scope of practice, was also identified by the nurse leaders as needing to be defined.

Task Shifting Defined

The clear delineation of usual responsibility would facilitate identifying precisely which tasks are shifted. Several nurses questioned how task shifting was defined. "*You know this task shifting remains unclear, everyone only understands it in their own way.*" (Nurse Leader 9, Uganda). An especially interesting observation was:

> *I believe it has to be clear that the task shifting does not mean the parochial type of thinking that when woman taking over higher level it is then task shifting ... type of thinking that high level women take over those roles. I'm saying it needs to be defined, the concept is not clear yet.* (Nurse Leader 6, Tanzania).

The idea that calling the nurses' expanded role *task shifting* is done to avoid attributing greater ability and credibility to the nurse is an area with potential for future studies and exploration.

If Mistakes Occur

Closely linked to the need for a clear scope of practice and definition for task shifting is the need to have policies in place that would provide nurses with legal and regulatory protection. The nurse leaders acknowledged that population health benefited because of task shifting but several pointed out that when things went wrong, it placed the nurse in an untenable situation.

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The widespread dearth of clear policies supporting nurses who take on task shifting results in nurses without protections. "*They're not even recognized, and, if mistakes occur, they're still judged. They're still made liable for the mistake that have occurred, yeah.*" (Nurse Leader 3, Uganda). "*They may face a problem, and there will not be any rules that protect them while they are partaking such a thing. So it has to be incorporated and in the scope of practice*" (Nurse Leader 10, Ethiopia). *"I'm very much on making it official; you can protect the patient and also the nurses. Because, eventually, if something goes wrong when it is not official, this nurse will be in problems."* (Nurse Leader 9, Uganda).

The difficulty for the nurses of being placed in the situation where task shifting is common, training is inconsistent, and protection by policy is nonexistent was well explored by the nurse leader Nurse Leader 14, Uganda.

> *So if there is harm they will be questioned, 'Who told you to do it?' 'Is it within scope?' So those that carry out this task shifting arrangement due to their passion, due to their view that they are helping a patient, the view is that it is best to help the patient. … and in case of litigation … you see the dilemma? Help the patient and save a life. The person doing task saves lives, but if the patient dies I'll be taken away. It leaves the nurse in a dilemma … It's tricky, tricky, tricky -- the policy, the law coming in…* (Nurse Leader 14, Uganda).

"*Most of these tasks left have been shifted to nurses are supposed to be done by doctors … or clinical officers … But they find it more easily to shift these tasks to nurses… I don't see them giving the support that the nurses would require.*" (Nurse Leader 7, Uganda). Feeling vulnerable and unprotected by the providers whose tasks they are assuming was noted across many interviews. "*Because in the unlikely event something happened … if anything should happen then the doctors would clean their hands and leave the nurse on their own to face disciplinary action. And any other restrictive action and – and that really is unfair to them.*" (Nurse Leader 5, Kenya).

Policy that clearly defines what a nurse can do may help garner support for task shifting in multiple ways. The nurses and other healthcare workers would have a clearly delineated plan with protection for all healthcare workers and especially nurses.

Deployment Imbalance

Deployment imbalance emerged as a theme from the interviews and reflects the inadequate distribution of human resources for health. The majority of healthcare providers are located in urban settings and the majority of patients are located in rural areas (Buchan et al., 2013). "*The main cause has been, as I said, shortage of skill mix and shortage of numbers of medical providers like doctors, there are few. Only when you work in the rural areas is even worse. These numbers are decreasing tremendously at the rural area.*" (Nurse Leader 12, Tanzania). "*One other obstacle is where are we deploying them? ... Almost 80% live in the rural setting. ... African countries, including Uganda, the majority of healthcare workers are in the urban setting.*" (Nurse Leader 14, Uganda).

This common theme was framed personally by a nurse leader using examples from her family to illustrate the deployment imbalance and how it has the potential to stratify the quality of care. "*They are less human being for certain rural areas to be looked after by lowly qualified people ... My mother in ___ is looked at by a highly qualified doctor while my grandmother in a rural area is supposed to be looked after by someone just sent to do this specific.*" (Nurse Leader 5, Kenya).

A difference between the countries related to the preparation of nurses for deployment was mentioned. A nurse leader interviewed from Tanzania indicated that the nurse preparation considered the area of deployment.

> *So they support the nurses who are working the remote area -- they are supposed to be skilled with very, very vital skills to rescue the life of the patient. So they support, they*

train us. Even the specialist, they go to the remote areas, they train people. For example, the medics of obstetrics, the medics of surgery services, they go there, they train them. (Nurse Leader 13, Tanzania).

In addition to imbalance in deployment there is also an imbalance noted in the remuneration for nurses. Just as deployment to remote locale does not consistently trigger more preparation, taking on the increased work involved in task shifting does not consistently increase the remuneration of nurses.

Fair Compensation

Several nurse leaders articulated that nurses are being asked to take on additional tasks and they are not compensated for the extra responsibility. "*What really happens is they'll give all these additional tasks but the remuneration is the same and sometimes the nurses or mid wives feel fatigued because they have all these many tasks to do.*" (Nurse Leader 8, Uganda). "*So they're taking on more – more responsibility and without being appropriately compensated for the additional effort.*" (Nurse Leader 5, Kenya). "*On top of that, they should also be remunerated.… Because most of the work is done – the nurses carry all the workload. They don't get extra pay for it.*" Nurse Leader 3, Uganda).

The nurse leaders in Kenya more often identified that regulatory measures were in place to assist nurses in the task shifting environment. A nurse leader identified the policy of having detailed standing operating procedures in place. "*And one of the key element was to have standard operating procedures in each and every… facility so that any new person who comes, even without orientation* [can complete the expected tasks]." (Nurse Leader 1, Kenya). An up-to-date scope of practice was identified as a need in the other countries but that was not the case in Kenya. "*Let me say this, that in Kenya we have a scope of practice for nurses. So we have a*

defined scope for degree nurses, diploma nurses and certificate nurses and those who have done

specific training." (Nurse Leader 5, Kenya).

In considering the East African healthcare environment of task shifting, it is difficult to

separate regulatory needs from nurse preparation. A cohesive national agenda for achieving the

millennial development goals must incorporate population health needs in the context of the

countries' healthcare systems and available human resources for health.

Nurse Preparation

The majority of nurses in Ethiopia, Kenya, Uganda, and Tanzania are educated in

government schools and universities, and work in government clinics and hospitals. The

government focus of educating providers and providing care to the population of the country

compels a strategic connection between policy and education. The nurse leaders interviewed did

not convey that a cohesive plan was currently in place across countries to prepare nurses for task

shifting. These educational themes explored were *not prepared, pre-service education, on-the-*

job training, continued professional development, and best practices.

Table 4-5 Nurse Preparation Themes and Sub-themes

Overarching Theme	Sub-Theme	Pattern
Nurse Preparation	Not Prepared	
	Pre-service	
	On-the-job training	
	Continuing Professional Development (CPD)	
	Best Practices	

Not prepared

An overarching perception by nurse leaders was that most nurses are not fully prepared,

but rather rely on their basic education and observation of others while in their initial position.

"The headache in our country is that they [nurses] are doing work they are not trained for…. They are not trained in the way of some others and therefore, in the beginning, they will suffer…" (Nurse Leader 11, Ethiopia). *"But specific empowerment, really, is not there in ways of training them and giving them those extra skills... it is not there."* (Nurse Leader 3, Uganda). The incomplete preparation to take on the roles that task shifting thrusts upon them was noted in the nurses who completed pre-service education adequately prepared for their nursing responsibilities.

Pre-service Education

Participants noted that specific training for task shifting was not usually included in formal education. The work that the nurse is asked or expected to do in an environment of task shifting is driven by population health needs and is not limited to the nurse's official role for which pre-service education is designed. The changing tableau of population health needs limits the ability of pre-service education to meet all nurse preparation needs. What is needed to alter curriculum can be cumbersome and involves identifying specific skills as outlined in the themes of scope of practice and task shifting defined. *"Minister of Health encourages incorporation into the pre-service curricula but, in some instances, it takes long so it really depends on the lecturer or the teacher… sometimes curricula takes over five years to be revised."* (Nurse Leader 8, Uganda). This view was contrasted by the perspective from Tanzania whose remarks implied that because task shifting was currently being engaged in, the pre-service education was adequately preparing nurses.

> *So it is not official that we are trained to do task shifting, but when we are implementing our day-to-day activities we're indirectly doing task shifting, but it is not official. So even if it will come official that we are now preparing you to do task shifting, to my view it won't be a new concept because almost we are doing it.* (Nurse Leader 13, Tanzania).

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Other nurse leaders noted that the foundational information for task shifting was a part of the pre-service education.

> *You know even –the nurse is trained to do nursing, but when it comes to things like pharmacology you know how the drug works. You do the job because there is no one to do it. So if you are giving the drug you can explain the rationale but you are not trained to dispense.* (Nurse Leader 1, Kenya).

 "*In most cases, you may train, they might have the knowledge, the general basic sciences, but they might not know probably, why they are doing…*" (Nurse Leader 8, Uganda). The nurse leaders considered the pre-service education to be of high quality for the nursing role. With the expansion of the nurses' role, the pre-service limitations were noted and additional preparations such as on the job training or CPD were identified as being needed.

On-the-job training

The nurse leaders frequently identified on-the-job training as a way that nurses were prepared to take on the expanded role of task shifting. It was sometimes difficult to differentiate "not being prepared" from "on-the-job training". "*So if it happens some of them can be ready to do that, but in most cases, most of these issues are learnt on job. They do it the first time, the second time, then it becomes perfect because they've done it a hundred times*" (Nurse Leader 8, Uganda). The comments by the majority of the nurse leaders indicated that on-the-job training was not a formal process. "*Learning by doing with others or seeing, actually doing the job. They do not get formal training, on-the-job actually... but they will learn from doing, from mistakes. It is very difficult.*" (Nurse Leader 11, Ethiopia). "*They are just working ... generally, they are working – just they learn on the job. They work through experience …*" (Nurse Leader 3, Uganda). Learning through experience is a part of all jobs but the lack of a formal system was identified as possibly placing the nurse in the vulnerable position of being unprepared for task shifting.

The lack of formal on-the-job education was identified as particularly problematic in new nurses. "*Also, maybe what you ought to know is that system has not been favorable for the new implants. Like somebody, say who has been in school and works in maybe two or three months, and they just take on the role of task shifting.*" (Nurse Leader 4, Uganda). The experienced nurse might be able to more easily take on tasks without guided by on-the-job training when compared to the new graduate nurse. CPD was identified by the nurse leaders as a way to augment on-the-job training.

Continued Professional Development

CPD was identified as an important way to augment pre-service education. A view of on-the-job training that incorporates CPD was well articulated by one participant;

> *So what we do, for those who have chance to attend, those with special training, when they come back, we expect to continue teaching others. We call on-the-job training. They are supposed to continue providing on-the-job training to other fields that are around. Again with supported supervision and mentoring. We complement the efforts from on-the-job training to supervision and mentorship to at least help them to proficient these skills on the ground.* (Nurse Leader 12, Tanzania).

Identifying a skill set needed for a specific clinic or population served was noted as a preferable way to elect who would attend CPD. Structured plans for CPD would be arranged based on the needs of the setting and the nurse, with the expectation that on return the nurse would be expected to share the information, was mentioned during several interviews. "*And the other one is in-service training is the best one because they learn from the areas where they work so based on the context of the area …*" (Nurse Leader 10, Ethiopia). The need to develop a plan for nurses' participation was also noted "*We have what you call CPD, CPD programs although … there's no clear framework* [for] *CPD the practice in our country... you do needs assessment, and then you identify the gaps, you send the people for such training.*" (Nurse Leader 1, Kenya).

Minister of Health and council are responsible for the people who are already in service. So they are supposed to do this but in most cases, they do not do that. You will find – I've traveled in many, in many units – you'll find that they'll be here and there training." (Nurse Leader 8, Uganda).

Potential issues in the work place were noted. The time and cost of CPD was found to be a barrier to participation. "*Therefore, being trained on the job means she will be able to gain the necessary competency. To take a course and then come back is time consuming and costly and should be an application ...*" (Nurse Leader 6, Tanzania). The selection by administrators of who participates in CPD is another area that is potentially problematic.

> *You have a few nurses who are probably being more friendly to the administrators who are always being sent to have these skills. Where there are different skills from different areas, there is a tendency to select the same person several times and neglecting others. And you can imagine what – how it impacts on the teamwork in the same area.* (Nurse Leader 7, Uganda).

Best Education Practices

Continuing professional development was identified as an effective way to prepare nurses for the specific skills involved in task shifting. "*If they are well trained, than it will be okay... it would be done as continued professional education.*" (Nurse Leader 3, Uganda). "*But all these procedures they are performing after being through a certain training to teach them their skills before they go back to their health facility to provide those kinds of work services. So this has been going on for a few years here in Tanzania.*" (Nurse Leader 12, Tanzania).

> *I'll still give an example of PMTCT [preventing mother to child transmission of HIV] ... if they wanted maybe unit x to offer PMTCT , they'll identify people who are on that unit then get them trained and then they go back to their unit and offer the service. That's the new task.*" (Nurse Leader 8, Uganda).

CPD and on-the-job-training as an augmentation to pre-service education was identified as appropriate in a changing healthcare environment. "Therefore the new services, for example the vertical one, we attended the on-the-job training." (Nurse Leader 13, Tanzania).

I think it needed to be formally done. I know that it is ad hocly done, but right now it is good that it is formally done, and the people prepared and in their scope of practice it is learned and I think it would be combination of both on job and the, and the some degree of formal classroom preparations. Let people know they know the rationality behind some of the procedures and skills that they perform (Nurse Leader 4, Uganda).

"Task shifting is very important, but how we handle it is to maintain the quality is very important … So on job training is basically identifies a need. Then the nurses are trained according to that need." (Nurse Leader 7, Uganda).

A nurse leader in Uganda outlined in some detail the approach intimated by many of the respondents;

The best way one is, first analyze what are the nursing and when I say nursing, I mean both the midwives work at a nursing. What are the nursing needs in a particular country? Look at a country like Uganda -- we are looking at the health needs and its people. What are the needs of nursing? That is a difficult question. And therefore, if we identify the nursing needs, we are able to train people to develop competencies with skills and knowledge …. that the country needs and raise the health circumstance of Uganda. Then we prepare them. (Nurse Leader 14, Uganda).

The themes derived from the interviews with the East African nurse leaders explored a wide range of topics. In the section that follow the themes identified will be used to answer the research questions.

<center>Research Question: How are nurses prepared?</center>

"How are nurses in selected African countries prepared through formal education, continuing professional development and on-the-job training for task shifting?" Positive and negative aspects of preparation for task shifting were provided by the nurse leaders. The theme of nurse preparation provided details about how the nurses in East Africa are prepared.

In looking at the pre-service, on-the-job training and CPD, it can be noted that there are many ways in which nurse preparation is carried out. There is also a myriad of combinations of nurse preparation possible to prepare nurses to take on the expanded role of task shifting.

Research Question: Differences between countries in task shifting preparation?

There was significant congruity between the countries in answering the question "How does the preparation of nurses for task-shifting vary between countries?" Nurse leaders from each country identified similar issues driven by the deficits in the human resources for health. Differences between countries were included where relevant in the exploration of themes. The nurse leaders from Kenya generally identified more regulatory support for patients and nursing practice. The challenges faced by the nurses were more congruent. Nurse leaders across all countries unanimously lauded how nurses taking on the expanded role of task shifting contributed to population health.

Research Question: Task Shifting Best Practices

The third research question was "What are the best practices related to task shifting?" Based on the feedback from the nurse leaders and the extrapolated themes reviewed previously, the best preparation for task shifting is not something that can be a set template applied for all countries, all clinics, all providers. Simply put by a nurse leader from Kenya, "*Especially such that you do needs assessment, and then you identify the gaps.*" and "*It cannot be planned across, be a plan across. It … requires a needs assessment and you see you identify the gaps and then … the program can be continued.* "(Nurse Leader 1, Kenya). The consistent message from the nurse leaders was that providing the specific education that the nurse would need in the practice setting where they were assigned was important. Imbedded in the comments was that the needs varied

greatly depending on where the nurse was assigned and what tasks she would be expected to do, and that assessing the individualized need was essential.

Best practices would include clear policy protection, clearly defined scope of practice, and a task shifting definition that provided enough information to facilitate the adequate preparation of nurses for the specific tasks that would be taken on in an environment of task shifting.

Table 4-6 Study Themes, Sub-themes and Patterns

Overarching Theme	Sub-Theme	Pattern
Nurses' Burden	Few on the Ground	Standing in the gap
		Shifting away
	Heavily laden	Nurses' work goes undone
		Inadequacy of essentials
Patient Perceptions	Nurses Gentle Touch	
	Daktari / Musawa	
	For the Benefit of Our Patients	
Regulatory Needs	Scope of Practice	
	Task Shifting Defined	
	If Mistakes Occur	
	Deployment Imbalance	
	Fair Compensation	
Nurse Preparation	Not Prepared	
	Pre-service	
	On-the-job Training	
	Continuing Professional Development (CPD)	
	Best Practices	

Chapter Summary

The study asked nurse leaders about task shifting in their respective countries. The focus was what is actually being done in each of the four countries and what the best practice would be. The themes explored indicated a strong pre-service curriculum coupled with CPD and on-the-job training could prepare nurses to take on the expanded roles intrinsic to task shifting.

Nursing leaders identified additional areas that would ease the burden of nurses and contribute to the nurse being successful in an environment of task shifting. The leaders noted the need to clearly define task shifting and clarify the nurses' scope of practice. Policy initiatives are needed to provide nurses with equitable deployment and fair compensation. Essential to the preparation process is the clear delineation of what tasks the nurse should take on in the assigned setting. The nurse should then be provided CPD and structured on-the-job training. Building on a strong foundation in pre-service education that is based on a current scope of practice, coupled with on-the-job training augmented with CPD, nurse capacity will be increased and population health may be improved.

There are not enough physicians to meet population health needs in East Africa so nurses assume physician tasks, yet there are not enough nurses either. The themes from the nurse leader interviews indicate both areas of need but also highlight the successful contribution nurses are making to improving population health by taking on the expanded roles of task shifting.

Chapter 5

Discussion of Findings from an Exploratory Descriptive Study on Task Shifting

The deficit in human resources for health in East Africa makes it necessary for nurses to frequently take on tasks for which they do not feel adequately prepared. Policies may not be in place to define task shifting or to afford the nurse protection. Task shifting is multifaceted and, as such, the nurse leaders in this study articulated a variety of perspectives. The common themes that emerged will be considered in the context of the available literature. The study limitations will be reviewed. The study findings will be evaluated from the perspective of the NIC theory. In addition, support for aspects of the theory will be evaluated. The chapter will conclude with recommendations for next steps and future research.

Interpretation

The analysis of the nurse leaders' interviews resulted in four overarching themes being identified. Those themes were *"Nurses' Burden", "Patient perception", "Regulatory Needs"* and *"Nurse Preparation"*. The findings of this study were generally consistent with other published studies.

Nurses' Burden

The theme and sub-themes of nurses' burden were well aligned with the literature. The global HRH shortage is a significant and well documented factor (Buchan & Aiken, 2008; World Health Organization, 2008b; World Health Organization, 2013). The findings of this study provided the perspective from the nurse leader that is less often seen in the literature. Researchers frequently consider patient outcomes of task shifting, cost savings is examined and conservation of physician time has also been considered in several studies (Babigumira et al.,

2009; Callaghan, Ford, & Schneider, 2010; Fulton et al., 2011; O'Brien et al., 2009; Wanyenze et al., 2010). Georgeu (2012) in the South African study Streamlining Tasks and Roles to Expand Treatment and Care (STRETCH) describes a study in which tasks were formally shifted from physicians to nurses, thereby, increasing the nurses' workload. The researchers acknowledge that the study sites were each affected by a lack of adequate numbers of all types of healthcare workers (Georgeu et al., 2012). The researcher uses the term "improvised shifting" to describe what occurred as tasks were shifted away from the nurses (Georgeu et al., 2012). A strategy for addressing the increased workload should be a part of every task shifting implementation plan.

Heavily Laden

Increased work and the difficulty of completing nursing specific tasks were common concerns of the nurse leaders interviewed for this study. Emden (2013), in a systematic review about increased access to care created by task shifting, called for the consideration of the work load of the nurse prior to taking on the expanded duties of task shifting. Taegtmeyer et al. (2011) noted the increased stress that task shifting brought to healthcare workers. Even with efforts to ameliorate the "impact of task shifting on strained resources" (Taegtmeyer et al., 2011, Content in Task Shifting, para 1) the need for policy was identified. Involving all parties is encouraged in the published literature to facilitate the successful implementation of task shifting (Ng'ang'a & Byrne, 2012; Uebel et al., 2011; Zachariah, Ford, & Philips, 2009).

Standing in the Gap

The nurse leaders were all aware of the phenomena of unofficial task shifting. The theme "standing in the gap" is used in this study to frame those tasks that nurses take on without official programs in place. It is routine for nurses in developing countries to fill roles beyond their education and scope of practice due to HRH shortages and patient need (Miles, Seitio,

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&McGilvray, 2006). In rural clinical settings, if a physician is unavailable, the nurse delivers

medical care to save lives and, if the nurse did not, the patient or community might go without

lifesaving care. This would be an expected finding to any one of the nurse leaders interviewed

and the nurses that work in East African countries.

Shifting Away

The findings in this study that were termed *shifting away* were also consistent with the

published literature. The nurse leaders who were interviewed voiced concern about the sequelae

of new cadres of healthcare workers on the current healthcare system. Their concern was

consistent with the literature (Dambisya & Matinhure, 2012; Emdin & Millson, 2013;

Taegtmeyer et al., 2011). The qualifications of the people to whom tasks are shifted are also an

explicit concern (Taegtmeyer et al., 2011).

Nurses Work Goes Undone

That *nurses' work goes undone* was frequently noted by the nurse leaders but has not

been commonly addressed in the literature. Typical of research on task shifting was a study

conducted in Rwanda by O'Brien et al. (2009). O'Brien et al. analyzed the effectiveness as

measured in physician time saved in a national nurse led pilot program (O'Brien et al., 2009).

Nurse time, increased workload of the nurse, and decreased ability to complete usual tasks has

not been studied. In some cases, the lack of adjusting for the increased workload of the nurse was

specifically included. In a Zambian study, researchers used the term "task sharing" rather than

task shifting to indicate "staff who take on additional tasks without dropping (shifting) their pre-

existing tasks" (Walsh, Ndubani, Simbaya, Dicker, & Brugha, 2010) Background, para 6).Walsh

et al. observed that as funding became available for increased provision of HIV care, providers

were expected to increase both the service provided and the number of patients for whom they

cared. Frequently, nurses have no one to shift care to and the task shifting or sharing is the reality of increased work load expectations.

A study in which nurse workloads was mentioned was conducted in Uganda (Nankumbi et al., 2011). The researchers in the study evaluated the effect of increased HIV funding from PEPFAR on the nurses working on the project. The researchers found 80% (n=16) of the nurses reported an increased workload. In this study, nurse satisfaction was proactively addressed by the researchers and additional nurses were added to address the elevated demands. This coupled with infrastructure; supply issues, targeted nurse education, and increased autonomy overall positively contributed to the nurses' work-related satisfaction (Nankumbi et al., 2011).

Not considering the usual work of the nurse is a limitation of many studies. Assessing the value of task shifting only by the physicians' time that is saved belies a lack of appreciation for the value of nursing. Researchers studying task shifting should consider that as tasks are shifted to nurses, routine nursing tasks are often left undone. That nurses' work goes undone when tasks are shifted to an already busy nurse should be obvious to all. Nurse time and work has value, and that should be incorporated into programs and research related to task shifting.

Inadequacy of Essentials

The inadequacy of essential, while only mentioned in this study by nurse leaders from Tanzania, was noted in many studies across Africa. Task shifting occurs in environments of scarce resources and it is consistent with lack of adequate HRH that there may also be a dearth of supplies (Ferrinho, Sidat, Goma, & Dussault, 2012; Miles et al., 2006; Tangcharoensathien & Evans, 2013). Having adequate essential equipment is routinely considered by those conducting studies. In South Africa, the STRETCH trial initiation of ART had to be stopped for three months due to budgetary shortfall of the provincial health department (Fairall et al., 2012). In a

study about nurse mentoring conducted in Rwanda, researchers noted that shortages in medical supplies and equipment interfered with the nurses' ability to provide care (Anatole et al., 2012). One study in Uganda included essential supplies for nursing staff as they took on the provision of patient care (Nankumbi et al., 2011). Another study in Uganda by Richter et al. (2012) concerned nurses' ability to influence policy. In the qualitative study, Richter et al. observed nurses lamenting that the lack of supplies and drugs negatively impacted the ability to implement policy. The specific example provided was the difficulty of following an HIV prevention policy when the required protective gear was not available (Richter et al., 2013).

The need for supplies and equipment underscores the complicated issues facing nurses in East Africa. Even in environments of nursing shortage, nurses take on new tasks and assume expanded roles because they are motivated to provide lifesaving care (Uebel et al., 2011). The typically overworked nurse is still able to positively impact patients' health. The patients, on the whole, recognize and appreciate the nurses' effort (Uebel, K 2011).

Patient Perceptions

Patients identify nurse-provided care as positive in this study and in the majority of the published literature. Lassi, Cometto, Huicho, and Bhutta (2013) evaluated the effectiveness of "mid-level healthcare workers", a term that included nurses, midwives, and non-physician clinicians. Through a meta-analysis of 53 studies focused on healthcare worker effectiveness, Lassi et al. determined that the patients receiving care from nurses and midwives are as satisfied or more satisfied than those receiving care from physicians (Lassi, Cometto, Huicho, & Bhutta, 2013). This was consistent with this studies' theme of the nurses' gentle touch. Nabirye and colleagues noted in their job satisfaction study that there were publicly expressed concerns about nursing care in Uganda (Nabirye, Brown, Pryor, & Maples, 2011).

Daktari/Musawa

Discussion concerning patients not differentiating between categories of providers was not found in the literature. The daktari/musawa theme may have been absent in the published research due to the nature of previously conducted studies and the usual comparison of the patient outcomes from nurse care to physicians care. The possible obfuscation of the patient not differentiating between types of providers might decrease the validity of the research results.

That nursing care benefits patients is noted repeatedly numerous researchers (Callaghan et al., 2010; Emdin & Millson, 2013; Fairall et al., 2012; Georgeu et al., 2012; Lassi et al., 2013; Mdege, Chindove, & Ali, 2013; Nankumbi et al., 2011; O'Brien et al., 2009). Nurses recognize, and the research verifies, that task shifting enables more people to receive high quality and much needed care. What is missing is the formal support for the nurses engaged in task shifting.

Regulatory Need

The need for regulation related to multiple facets of task shifting was a significant theme in this study. The overarching theme and sub-themes were found to be prevalent throughout the literature (Campbell et al., 2013; Dambisya & Matinhure, 2012; McCarthy, Voss, Salmon, et al., 2013; O'Brien et al., 2009). Lassi et al. (2013) in a meta-analysis identified the lack of policies and support for 'mid-level' health workers as the most significant hurdle to be overcome for effective task shifting. Institution specific policies were mentioned in a Ugandan study about task shifting but the absence of national policy and supportive regulation was an issue (Dambisya & Matinhure, 2012).

A call for commitment in the form of global policy support so that HRH can be most effectively used was made in an editorial by Sales, Kieny, Krechc and Etienned (2013). The authors expounded on health workforce development as being multifactorial and requiring

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intentional governmental policy planning and support. The need for a healthcare workforce that is adequately prepared and supported by policy was identified as an urgent need by a comparative study done by Campbell et al. (2013). The researchers examined policy in Brazil, Ghana, Mexico and Thailand related to universal health coverage and HRH, and found the need for government-wide approaches that prioritize appropriate education and adequate numbers of healthcare workers (Campbell et al., 2013). Key policy aspects were identified by the nurse leaders in the current study. Calls for general supportive policies were present in the literature. The specific areas of need identified by sub-themes in this study were also found in publication.

Scope of Practice

Clarity of expected role is an important aspect in preparing for task shifting. Miles et al. (2006) observed that nurses in developing countries frequently take on new tasks to respond to population health needs. He goes on to note that nurses have "rarely been supported in a systematic or planned way. As a result, nurses have extended their roles, often without appropriate training, support, legislation, and regulation to do so." (Miles et al., 2006).

McCarthy, Voss, Salmon, et al., (2013) surveyed nurse and midwife regulatory leaders from 13 east, central and southern African countries and included questions about official scope of practice. Leaders from eight of the countries included in the study had updated their scope of practice within the last five years. Pertinent to this study, Kenya and Tanzania had, Uganda had not, and Ethiopia was not a part of the McCarthy, Voss, Salmon, et al study. However, the researchers identified that the scope of practice had not been updated to incorporate the nurses involved in providing HIV care (McCarthy, Voss, Salmon, et al, 2013).

The published information about task shifting acknowledges the shortage of all healthcare workers while simultaneously recognizing that, of the educated professionals, nurses

are the most abundant in number (Ng'ang'a & Byrne, 2012). Evidence of positive outcomes from programs of nurses engaged in task shifting are prominent in the literature (Callaghan et al., 2010; Sanne et al., 2010; Sherr et al., 2009; Shumbusho et al., 2009). What is absent is the clear description of the work currently being done by nurses that is outside the protected scope of practice in unofficial environments of task shifting.

Task Shifting Defined

Task shifting in a general way is defined in numerous WHO documents as "the rational redistribution of health workforce teams" (WHO, 2008). This general definition is inadequate when considering the nurse's specific role and scope of practice. Task shifting defined with clear limits that is agreed upon by all involved would be able to provide sustainable improvements to address the HRH needs in low resource settings (Munga, Kilima, Mutalemwa, Kisoka, & Malecela, 2012). Munga et al. calls for a consensus that is evidence-based to improve delivery of healthcare.

If Mistakes Occur

A common theme heard by the nurse leaders in this study involved the consideration of the sequelae if the nurse engaged in task shifting had a bad outcome. The need for regulation that has been mentioned by several authors has not included the specific concern about the risk to the nurse. There was frequent mention in the literature about the need for regulation, while specific concern about the risk to the nurse was largely absent.

In an early article on nurse prescriber, Miles et al. (2006) considered the difficult position of the nurse who faces legal risks if working outside the designated scope. Additionally, this was contrasted with the health related risk to the patient if the nurse does not act (Miles et al., 2006). Without regulation, the nurse continues in a vulnerable position.

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Deployment Imbalance

The theme of deployment imbalance found in this study was well supported in the literature. Maldistribution of healthcare workers is identified as an additive factor to the deficit in numbers of healthcare workers (Fulton et al., 2011b; World Health Organization, 2011). The lack of healthcare workers and resulting limited access in rural areas was identified as a barrier to healthcare access and universal health coverage (Buchan et al., 2013; Cometto & Witter, 2013).

Increasingly, deployment imbalance is written about in the context of not only rural versus urban mismatch but also of the skill mix (Buchan & Aiken, 2008; Campbell et al., 2013; Cometto & Witter, 2013; Fulton et al., 2011b; Mdege, 2013; Ng'ang'a & Byrne, 2012; Tangcharoensathien & Evans, 2013; Ueffing et al., 2009). Buchan et al., (2013) observed that both geographic and skill mix imbalance are found around the globe. Higher nurse salaries in urban settings may also contribute to deployment imbalance (Ueffing et al., 2009).

Fair Compensation

Nankumbi et al. (2011) in a study conducted in Uganda noted that low salaries were a key component in the dissatisfaction of nurses in Uganda. Nurses were offered additional remuneration in the study and the researchers speculate that this contributed to higher levels of nurse satisfaction (Nankumbi et al., 2011). Nurses being asked to take on more responsibility and with unchanged pay is a widespread occurrence and a concern of many (Babigumira et al., 2009; Bärnighausen, Bloom, & Humair, 2007; Dambisya & Matinhure, 2012; Stevens, Mathijs, & Bomela, 2009).

Policy Issues

The previous sections of this paper consider several policy issues faced by nurses engaged in task shifting in East Africa. Regulatory need is a complex theme with far reaching

ramifications. The policy makers would be wise to solicit nurse input so that resulting policies offer protection to nurses and patients (Richter et al., 2013). Comprehensive policy to facilitate task shifting would include a pathway to providing knowledge and skills needed by the nurse (Crisp, 2008; McCarthy, Voss, Salmon, et al., 2013).

Nurse Preparation

The importance of adequately preparing nurses and other health workers to assume the expanded roles of task shifting is a clear and consistent theme in this study and across the literature (Campbell et al., 2013; Ferrinho et al., 2012; McCarthy & Riley, 2012; McCarthy, Voss, Verani et al, 2013; Tangcharoensathien & Evans, 2013). Widespread global attention has been given both to expanding the numbers of nurses and preparing them to meet the changing expectations of demanded in the current healthcare environment (Frenk et al., 2010; Nyamtema, Pemba, Mbaruku, Rutasha, & van Roosmalen, 2011). The driving force of the MDG and the centrality of the HRH to meet the global health goals has brought renewed attention and policy focus to health workforce preparation (Crisp, 2008; Frenk et al., 2010; Tangcharoensathien & Evans, 2013). Healthcare has changed rapidly with the stressors of increasing chronic and infectious disease. The provision of care has been evolving yet little has been done to update the way healthcare workers are educated (Ferrinho et al., 2012; Zhao et al., 2013).

In this study, several education modalities were identified by the nurse leader as best practice for preparing nurses for task shifting. As a result the identified subthemes of not prepared, pre-service, on-the-job training, and continuing professional development (CPD) will not be considered separately. The current literature and research about preparation for task shifting will be considered in relation to the overall theme. Pre-service education, CPD, and on-the-job training were each a part of a comprehensive situation-specific plan. This is consistent

with the published documents (Crisp, 2008). The nurse leaders identified best practice as using multiple modalities that targeted identified learning needs for the nurse working in a specific setting.

Researchers in Tanzania evaluated the preparation of 45 associate medical officers with nurses and midwives to provide care for comprehensive emergency obstetric care and anesthesia (Nyamtema et al., 2011). The trainees were selected in part by considering those from rural locations with a recognized need for improved maternal care. The curriculum was developed in a manner similar to the practices that nurse leaders in this study identified as best practice. The plan began with the "occupational profiling" and assessment of clinic needs specific to maternal health. Objectives that met those needs and related competencies with details about how the objectives would be met were developed. Arrangements for the financial, human, and physical resources needed for effective learning and teaching. The researchers used a competency based curriculum over three months that included didactic and clinical components. The end of the training evaluation was a written assessment and an Objectively Structured Clinical Examinations (OSCE). Evaluation of the preparation in the health clinics was done by a decreased number of referrals, an increase in caesarian section rate and decrease -- although not statistically significant -- in still births which were decreased by 60% (OR =0.4; 95% CI: 0.1-1.7). The researchers concluded that upgrading health provision with task shifting by providing targeted education was successful. As a result of the study, the provision of care was expanded in 12 health clinics in 11 rural clinics (Nyamtema et al., 2011).

A study done in the Free State of South Africa began by identifying a population health need, a recommendation of the nurse leaders in this study. With the goal of decreasing mortality rates among people waiting on treatment for HIV, the learning needs of the nurses were

identified (Uebel et al., 2011). The researcher determined that a randomized control trial would be ideal to provide high level evidence in support of task shifting and STRETCH was developed (Fairall et al., 2012; Uebel et al., 2011). Eighteen months of meetings were held between stakeholders to increase support and effectiveness (Uebel et al., 2011). The nurses who were to assume care of HIV patients were provided training and ongoing support and on-the-job training (Fairall et al., 2012; Georgeu et al., 2012).

Three phases were used in implementation with the stated purpose of providing the nurses with "time to gain confidence with ART" (Fairall et al., 2012). The training built on previous education of the nurses by having a week of lectures followed by a week of training at an existing ART site (Uebel et al., 2011). Additional weekly lectures were broadcast and short follow-up case scenario sessions over several weeks. Uebel et al. noted that onsite managers and physicians were designated to provide support to the newly trained nurses.

The level of support provided the nurse varied and their clinical confidence was found to be linked to the level of support given (Uebel et al., 2011). The researcher noted that ongoing clinical support would best be provided by local support teams. The STRETCH support teams included local area managers, pharmacy coordinators, physicians, and more experienced nurses (Georgeu et al., 2012). The researchers concluded that nurses, with appropriate education, could assume the prescriptive care of HIV patients with education.

The careful consideration of how to prepare the nurses for an identified population health need with close follow up and infrastructure support epitomize the investment into both the nurses' human capital and the nurse structural capital. Developing nurses' skill sets to be effective in the advanced role for task shifting requires multiple investments. Successful task

shifting is possible with concerted effort and population health is the benefit gained by such an investment.

Nursing Intellectual Capital

The focus of this study was on the perception of nurse leaders about the educational investment in the nurses, primarily by the government, to prepare them for task shifting. Nursing intellectual capital is composed of nursing human capital, nursing structural capital, and nursing social capital (Covell, 2011). Nursing human capital consists of the knowledge and skills of the nurse while nursing structural capital is comprised of the tools that support the nurse such as protocols and practice guidelines (Covell, 2008). Nursing social capital "refers to the time, patience, teaching, etc., that individuals 'invest' in each other in relatively closely knit social groups and peers" (Gopee, 2002 p 609). The NIC nursing human capital investment into nurses engaged in task shifting is embedded in their preparation. It is reflected in the nursing human capital which is the knowledge and skill of the nurse (Covell, 2008). The various modes of preparation of nurses for task shifting are investments specifically in the nurses' human capital which is defined as the skills and knowledge of the nurse. The need for additional types of investment into the nurse related to protective policies and clearly defined scope of practice were important themes and will be explored in some detail. The investment into the nurse through education is only one way that nurses can be supported.

While exploring nurse preparation for task shifting, NIC related themes emerged: These themes brought to light the need for investment in nurses in ways other than education. Many areas in need of investment were linked most closely to tools that support the nurse in their work or nursing structural capital.

Nursing Structural Capital

The findings of this study offer support of Covell's (2008) NIC theory and the associated tenets. Nursing structural capital is investment into nurses through education adds to nurses' human capital, preparing them for task shifting, improving patient outcomes and ultimately improving population health by increasing access to healthcare providers. National level investments in nursing structural capital are present, but in need of expansion to comprehensively provide support to nurses engaged in task shifting.

Throughout the nurse leaders' interviews and subsequent analysis, the need for clear policies and regulations related to task shifting was identified. The Ministries of Health are responsible for determining the priorities in population health and instituting the subsequent staffing skill mix at government clinics and hospitals. National level policies drive curricular changes linked to nurse and other healthcare worker preparation. The nurse leaders identified a clear need for a defined scope of practice of nurses' usual work and a carefully considered exploration of what task shifting actually consists of.

Policy and regulation are foundational for other investments that enhance the ability of the nurses' engaged in task shifting to impact population health. Government policy can require appropriate education for tasks, certification for specific skills where needed, and explication as who is to do which task, and regulatory protection for those taking on the expanded role.

Nursing Human Capital

The number of nurses in East Africa does not meet WHO standards and the nurses in Kenya, Ethiopia, Uganda, and Tanzania are asked to take on tremendous responsibilities to provide care. Task shifting frequently adds to the nurses' workload with few options available to alleviate the usual nursing demands. Nursing human capital can be observed in the vast

resourcefulness of the East African nurse; the ability to apply related concepts and observations to adapt to the needs of the patient in front of them. It is nursing human capital that is increased and enhanced when the nurses gain new knowledge or acquire a new skill.

Findings from the study support the proposition that investment in the nurse ultimately contributes to population health. Nurse education in all of its forms is an investment in the nurse and increases the nursing human capital. The nurse leaders that were interviewed identified targeted education as the most beneficial for the task shifting nurse. The nurse is then able to engage in specific tasks with the requisite knowledge and skill set to meet the identified needs.

Nursing Social Capital

Nursing social capital was also supported by the study findings. The nurse leaders interviewed provided examples of nurses supporting one another in a variety of ways. Nurses allowed and encouraged their colleagues to attend CPD and offered support for taking on new tasks. There are professional organizations where nurses provide support for one another in their clinical specialties. These are exemplars of the nursing social support component of the NIC theory. "Yes, so we support each other. If you know things and even if when you go for training and continuing education the new service, when you come back you are supposed to train the other colleagues you are working with." (Nurse Leader 13, Tanzania). Nursing organizations were identified as another way nurses were supported. "We have chapters for representing clinical specialties … they come together every so often to support one another through sharing their experiences and so on." (Nurse Leader 5, Kenya).

The pride of the profession was identified as creating support for fellow nurses. "The circumstance with other nurses … They are encouraging, I mean nurses, they are proud of their profession ..." (Nurse Leader 11, Ethiopia).

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Contributing to Population Health

The findings of this study support the framework of NIC and the core tenet that investment in nurses ultimately contributes meaningfully to population health. Investments through education contribute to nursing human capital; the increase of the nurse's knowledge and skill. This skill and knowledge enables the nurse to effectively take on new tasks. Clearly defining the work expected of the nurse, having essential resources, and providing regulatory profession by clear government policy would contribute to nursing structural support. The structural support is a key undergirding requirement for many facets of nursing practice and task shifting (see figure 5-1). Nurses informally sharing the work load or formerly attending workshops exemplify investment in nursing social capital. Investing in the nurse in these ways creates an environment where nurses can incorporate additional skills into their practice to meet population health needs.
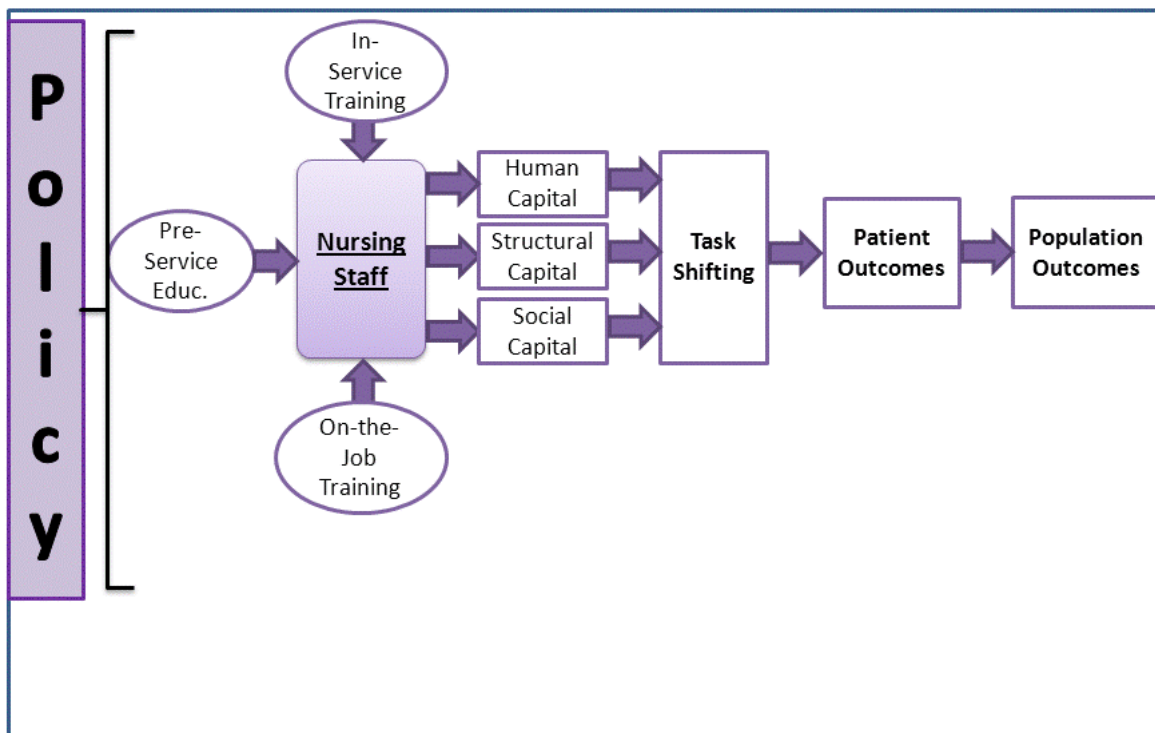

Figure 5-1 Spies Updated Task Shifting Model ©

Task shifting was identified consistently in this study as contributing to population health. This is both consistent with the literature detailed earlier in this chapter and supportive of the NIC outcome of improved population health. The NIC model was adapted to include policy and regulatory support as contributing to all aspects of task shifting.

Study Limitations

Both a strength and a limitation was the inclusion of only nurse leaders in this study. This was done intentionally to emphasize the nurse perspective, and leaders were selected to be interviewed based on their breadth and depth of knowledge. The leader perspective, while expert, lacks insight that may be gained by full time bedside care. The input from front line nurses might have brought forth a different perspective.

Four countries were included in this study which limits the transferability of the study results. While saturation of data was reached, only two nurse leaders from Ethiopia were interviewed. This may result in a skewing of findings, although answers were consistent across countries. A potential limitation was that nurses interviewed may have wanted the work of nurses to be perceived favorably in their country and may have altered their answers accordingly.

An additional limitation is that the majority of interviews were done over the telephone. Subtleties of body language and facial expression that may alter or shift meaning of replies could have been lost in the audio only interviews.

Conclusions

To achieve the millennial development goals and provide healthcare to people in East Africa an ongoing commitment to uplift and support the nurse and other healthcare workers will

be required. There have been many successful interventions involving task shifting. Achieving sustainable improvement in global health must involve preparing and protecting the key players.

Implications for Nursing

Population health needs in East Africa are overwhelming. The number of nurses and other healthcare providers are not able to keep pace with growing healthcare demands. Responding to patient and population need is intrinsically a part of being a nurse and, as such, nurses are engaged in task shifting officially and unofficially. It is time that the fact that nurses deliver 80% of healthcare in Africa is acknowledged and that the nurses' essential and life sustaining efforts are given strong multifaceted support.

As nurses leave school and transition to clinical practice, a clear job description should be provided that includes both those shifted tasks and the routine nursing. The value that the nurses' work brings is honored when it is carefully included in the workload discussion. What tasks can be shifted away from the nurse should be considered and what cadre is qualified must be taken into consideration as the skill mix at a clinic or on a hospital ward is considered. As nurses are assigned a clinical position or sent to remote locales, the expectations for the nurse should be clearly identified and appropriate preparation provided prior to deployment.

Allocation of healthcare workers to rural locations should reflect population health needs. The plan by default that everything will be done by the nurse is an unreasonable expectation and should be halted.

Policy must be in place prior to placing nurses in untenable situations of working outside their scope of practice, without adequate preparation and regulatory protection for their ongoing goodwill best efforts. While the overwhelming need to move forward with the task shifting

agenda and protective policy and regulation is clear, there is also great need for additional research.

Recommendations for Additional Research

The research is weighted heavily in favor that task shifting improves outcomes, but with that success comes an opportunity to focus on the factors that contribute most. A study about the clinical mentoring provided to nurses by more experienced nurse clinicians and physicians might provide information on the on-the-job component of preparation.

The published literature is largely silent about the plethora of unofficial task shifting and why certain tasks are excluded from being included in the official scope of practice. A qualitative study might explore bias against the nurse taking on non-HIV related higher level tasks. The physician-centric bias that healthcare is fraught with should be explored to consider work load and skill mix from an equitable perspective. The term used by many published studies is "non-physician clinician", an umbrella term that includes nurses, midwives and lower non-professional cadres of healthcare providers. This nomenclature diminishes the value of the nurse contribution, and value might come from further exploration.

Increasingly, work related quality of life (WRQoL) is being studied in African nurses. Such studies may bring important insight for nurse managers and hospital administrators to compare the WRQoL between nurses engaged in task shifting and those who are not.

Studying task shifting and role expansion from the perspective of the nurse practitioner role could bring insight into the healthcare arena in East Africa. A survey study could be done to contrast and compare the role of nurse practitioners currently officially working in the African countries of Botswana and South Africa with the nurses engaged in official task shifting in countries of East Africa.

A study could be done that compares the patient outcomes in a clinic or health center that specifically prepared the nurses for the expected work to patient outcomes in clinics that lacked this type of formal training. Such a study may provide clear evidence that preparing healthcare providers with intentionality is effective. Preparation for the expected role would seem obvious without need for validation; however, it might be appropriate to use in addressing policy gaps. The empiric data obtained could be incorporated into policy development to encourage pro-active, pro-nursing, pro-patient policy and regulation.

Chapter Summary

Task shifting is an important tool that can be used in concert with other measures to address population health needs in East Africa. This study was conducted in hopes of identifying how best to prepare nurses for the expanded role of task shifting. A consensus opinion from the nurse leaders interviewed in this study emphasized assessing the situational needs and tailoring the educational initiative accordingly. The importance of targeting the specific knowledge and skills needed by the nurse in a clinical area and then designing with a combination of pre-service, in-service, and on-the-job training to meet those needs was made clear by the nurse leaders. Investments in both the nurses' human capital and the nursing structural capital are desperately needed to maximize the effectiveness of the nurse working in an environment of task shifting.

A compelling theme emerged related to the need for comprehensive policy support of the nurse engaged in task shifting. The need for regulations was present in the published literature, however the conviction and concern with which the nurse leaders discussed this need was clear and convincing. Task shifting as a National Ministry of Health policy should be transparently and officially adopted. Nursing practice and task shifting should be clearly defined; curriculum should be developed that prepares nurses for the work they are expected to do; regulations that

support and protect the nurse engaged in task shifting should be in place. Equitable deployment

and workload and fair remuneration should be a priority in countrywide strategic planning of

how to best manage healthcare workers to meet population health needs.

Appendix A

Informed Consent

Nurse Participant

INFORMED CONSENT

Nurse Participant

PRINCIPAL INVESTIGATOR NAME:

Lori A. Spies

TITLE OF PROJECT:

An Exploratory Descriptive Study on Task Shifting East Africa

INTRODUCTION

You are being asked to participate in a research study. Your participation is voluntary. Please

ask questions if there is anything you do not understand.

PURPOSE: The proposed exploratory descriptive qualitative study is about what nurse leaders

think about task shifting. The study will be about pre-service education, continuing professional

development and on-the-job training used to prepare nurses in Africa for the expanded roles of

task shifting.

DURATION: The interview will last one hour and thirty minutes in total.

PROCEDURES:

You will be asked to complete a brief demographic survey. After the survey is complete

you will be interviewed in a semi-structured manner about how nurses are prepared for task

shifting. All conversations will be conducted in English and recorded. The recordings will be

transcribed. The transcribed interview will be analyzed by the researcher. The demographic

surveys will be kept in a locked drawer in the office of Lori Spies, the principal investigator.

Recorded interviews will be kept in a password protected file that can only be opned by the

researcher on her computer. Transcriptions of the interviews will be kept in a locked drawer in

the principal investigator's office.

This study involves no experimental procedures.

POSSIBLE BENEFITS: The benefits will be personal satisfaction for by providing information

about the preparation of nurses for task shifting in East Africa. This information may be used to

help nurses become better prepared to engage in task-shifting. As a result nursing care in East

Africa may be improved.

COMPENSATION: There is no compensation for participating.

POSSIBLE RISKS/DISCOMFORTS: You may get tired while responding to the questions. If

you get tired, you may stop at any time.

ALTERNATIVE PROCEDURES/TREATMENTS: There are no alternative procedures.

WITHDRAWAL FROM THE STUDY: You may stop participating at any time without penalty

or loss of benefits, to which you are otherwise entitled.

CONFIDENTIALITY: In the unlikely event it becomes necessary for the Institutional Review

Board to review your research records, the University will protect the confidentiality of those

records to the extent permitted by law. Your research records will not be released without your

consent unless required by law or a court order. The data resulting from your participation may be made available to other researchers in the future for research purposes, not detailed within this consent form. In these cases, the data will contain no identifying information that could associate you with it or with your participation in any study.

If the results of this research are published or presented at scientific meetings, your identity will not be disclosed.

CONTACT FOR QUESTIONS:

Questions about this research or your rights as a research subject may be directed to Lori A. Spies via e-mail at Lori_Spies@Baylor.edu lori.spies@mavs.uta.edu, or Jennifer Gray at 817-272-5295. You may also call the Chairman of the UTA Institutional Review Board at 817/272-3723 for any questions you may have about your rights as a research subject.

The researcher will also provide you with a local phone number.

CONSENT:

Signatures:

As a representative of this study, I have explained the purpose, the procedures, the benefits, and the risks that are involved in this research study:

_____

Signature and printed name of principal investigator or person obtaining consent

Date

By signing below, you confirm that you have read or had this document read to you. You have been informed about this study's purpose, procedures, possible benefits and risks, and you have received a copy of this form. You have been given the opportunity to ask questions before you sign, and you have been told that you can ask other questions at any time.

You voluntarily agree to participate in this study. By signing this form, you are not waiving any of your legal rights. Refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled, and the you may discontinue participation at any time without penalty or loss of benefits, to which you are otherwise entitled.

_____

SIGNATURE OF VOLUNTEER   DATE

Appendix B

Demographic Questionnaire

Demographic Questionnaire

1. What country do you come from?

2. What is your position in nursing? What is your job title?

3. Where do you work? Please provide the name and include if it is urban or rural. Please indicate what type of setting it is such as Clinic, Referral hospital, College, School or University, Research institute, or Government Agency?

4. What was your initial level of education for nursing?

5. What is the highest level of education for nursing you have received?

6. Where did you receive your nursing education?

7. What type of school did you attend for your first nursing education?

   Government School

   Non-Government or private school

   Nongovernmental Agency

   Other

Appendix C

Interview Questions / Protocol

Interview Questions / Protocol

1. Is there a need for task shifting in your country?

2. To what extent is task shifting used in _[country]_____?

3. Do nurses in ____[country]____ receive specific education for task shifting?

4. If Yes how are nurses in your country prepared for task shifting?

    a.   in nursing school?

    b. with on-the-job training?

    c. With short courses / continuing education / continuing professional development?

5. What are the best ways that nurses in _____[country]___are prepared for task shifting?

6. Do you think most nurses feel well prepared to take on the roles expected of them?

7. How do nurses support each other in developing task shifting knowledge and skills?

8. In what ways are hospital administrators' supportive of nurses who are engaged in task shifting?

9. How do physicians respond to nurses engaged in task shifting?

10. Have patients ever commented on the expanded work that nurses are asked to do?

11. How do nurses being engaged in task shifting contribute to patients' health or well being?

12. Do most nurses who work in task shifting environments work with established protocols?

Appendix D

Saturation Grid

Saturation Grid

Participant	1	2	3	4	5	6	7	8	9	10
Question 1	Theme									
Q-2										
3										
4										
5										
6										
7										
8										
9										
10										

Appendix E

Study Introductory E-mail or Telephone Script

Study Introductory E-mail or Telephone Script

Greetings. My name is Lori Spies and I am Nursing PhD student at the University of Texas at Arlington in the United States. I have worked with nursing colleagues in Ethiopia and Uganda since 2005 and I have become interested in nurses work in East Africa. My dissertation research project is about nurses' preparation for task shifting in Ethiopia, Kenya, Uganda and Tanzania. I hope to interview nurse leaders from the targeted countries to gain knowledge to benefit nurses and the people they care for in East Africa. Your name has been provided as a nurse leader in your country that might be interested in participating in my dissertation project. There is no financial compensation for participation. All personal information of study participants will be confidential. Information about the study results will be available at the completion of the research project.

I will be attending the International Council of Nurses Quadrennial Congress in Melbourne Australia and would like to schedule a time to interview you during the May 19 through May 24th. Do you have a day that would be best for you?

Or

I would like to arrange a time for a telephone interview at a day and time of your convenience. Is there a date in the next two weeks that might work?

Sincerely,

Lori A. Spies RN NP-C PhD candidate

Appendix F

Baylor IRB Approval Letter

BAYLOR
UNIVERSITY
INSTITUTIONAL REVIEW BOARD

One Bear Place #97310 Waco, TX 76798-7310 * (254) 710-3763 * FAX (254) 710-7309 * WEBSITE: www.baylor.edu/research/irb

DATE:	April 1, 2013
TO:	Lori Spies
FROM:	Baylor University Institutional Review Board
STUDY TITLE:	[437326-2] An Exploratory Descriptive Study on Task Shifting
IRB REFERENCE #:	
SUBMISSION TYPE:	Amendment/Modification
ACTION:	APPROVED
APPROVAL DATE:	April 1, 2013
EXPIRATION DATE:	April 1, 2014
REVIEW TYPE:	Expedited Review
REVIEW CATEGORY:	Expedited review category 6

Thank you for your submission of Amendment/Modification materials for this research study. Baylor University Institutional Review Board has APPROVED your submission. This approval is based on an appropriate risk/benefit ratio and a study design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission.

This submission has received Expedited Review based on the applicable federal regulation.

Please remember that informed consent is a process beginning with a description of the study and insurance of participant understanding followed by a signed consent form. Informed consent must continue throughout the study via a dialogue between the researcher and research participant. Federal regulations require each participant receive a copy of the signed consent document.

Please note that any revision to previously approved materials must be approved by this office prior to initiation. Please use the appropriate revision forms for this procedure.

All SERIOUS and UNEXPECTED adverse events must be reported to this office. Please use the appropriate adverse event forms for this procedure. All FDA and sponsor reporting requirements should also be followed.

Please report all NON-COMPLIANCE issues or COMPLAINTS regarding this study to this office.

Please note that all research records must be retained for a minimum of three years.

Based on the risks, this project requires Continuing Review by this office on an annual basis. Please use the appropriate renewal forms for this procedure.

- 1 -

Generated on IRBNet

Appendix G

UTA IRB Approval Letter

Office of Research Administration Regulatory Services 817-272-3723
regulatoryservices@uta.edu http://www.uta.edu/research/administration
 Institutional Review Board
Notification of Exemption
February 28, 2013
Lori Ann Spies
Dr. Jennifer Gray
College of Nursing
Box 19407
Protocol Number: 2013-0410
Protocol Title: *An Exploratory Descriptive Study on Task Shifting*
Type of Review: Exemption Determination
The UT Arlington Institutional Review Board (IRB) Chair, or designee, has reviewed the above referenced study and found that it qualified for exemption under the federal guidelines for the protection of human subjects as referenced at Title 45 Part 46.101(b)(2): Research involving the use of educational tests, (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: (i) information obtained is recorded in such a way that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could be damaging to the subjects' financial standing, employability, or reputation. You are therefore authorized to begin the research as of February 28, 2013.
Pursuant to Title 45 CFR 46.103(b)(4)(iii), investigators are required to, "promptly report to the IRB *any* proposed changes in the research activity, and to ensure that such changes in approved research, during the period for which IRB approval has already been given, are not initiated without prior IRB review and approval except when necessary to eliminate apparent immediate hazards to the subject." Please be advised that as the principal investigator, you are required to report local adverse (unanticipated) events to the Office of Research Administration; Regulatory Services within 24 hours of the occurrence or upon acknowledgement of the occurrence.
All investigators and key personnel identified in the protocol must have documented Human Subject Protection (HSP) Training on file with this office. Completion certificates are valid for 2 years from completion date.
The UT Arlington Office of Research Administration; Regulatory Services appreciates your continuing commitment to the protection of human subjects in research. Should you have questions, or need to report completion of study procedures, please contact Robin Dickey at 817-272-9329 or robind@uta.edu. You may also contact Regulatory Services at 817-272-3723 or regulatoryservices@uta.edu.

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Biographical Information

Lori A. Spies entered nursing with the plans of providing healthcare and education to the medically underserved. Her goal of having a global clinical practice was expanded when she was led to join Baylor University Louise Herrington School of Nursing. To prepare others to provide hands on healthcare and conduct globally relevant research became the driving force in her career. As the Mission Coordinator for LHSON, she actively seeks way to build nurse capacity in her students, faculty colleagues, and in the nurses she works with around the globe.

Her research has included a Delphi Study in Uganda to help establish a national nursing research agenda in Uganda and a work related quality of life study in healthcare workers, also in Uganda. Task shifting became the focus of her interest and she conducted the dissertation study and a focus group study to explore the complex issues of preparing nurses to take on the expanded role demanded in environments of human resource for health shortages.

Lori A. Spies' teaching and program of research is driven by her passion for nursing, global health, nursing research, the role of the nurse practitioner, and building nurse capacity. Her projects include ongoing work with the North Texas African Health Initiative and the provision of research workshops and continuing education for nurses. As the developer and faculty for a month long study abroad to Ethiopia, she continues to work with graduate nurse practitioner students so that they might develop the needed skill set to contribute meaningfully to health in developing countries by direct patient, community and nursing education.