Examining Priority Setting and Resource Allocation Practices in County Hospitals in Kenya

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I was like a boy playing on the sea-shore, and diverting myself now and then finding a smoother pebble or a prettier shell than ordinary, whilst the great ocean of truth lay all undiscovered before me – Isaac Newton

DECLARATION

I, ***EDWINE W. BARASA***, hereby declare that the work on which this dissertation is based is my original work (except where acknowledgments indicate otherwise) and that neither the whole work nor any part of it has been, is being, or is to be submitted for another degree in this or any other university.

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THESIS ABSTRACT

BACKGROUND: Hospitals consume a significant proportion of healthcare budgets and are a key avenue for the delivery of key interventions. Understanding how hospitals use resources is therefore an important question. Priority setting research has however focused on the macro (national) and micro (patient) level, and neglected the meso (organizational, hospital) level practices. There is also a dearth of literature on priority setting in developing country hospitals, although they are recognized to suffer severe resource scarcity. This thesis describes and evaluates priority setting practices in Kenyan hospitals and identifies strategies for improvement.

METHODOLOGY: A case study approach was used, where two public hospitals in coastal Kenya were selected as cases and three priority setting processes examined as nested cases. Data were collected over a seven month fieldwork period using in-depth interviews, document reviews, and non-participant observations. A modified thematic approach was used for data analysis.

FINDINGS: Hospitals exhibit properties of complex adaptive systems (CASs) that exist in a dynamic state with multiple interacting agents. Weaknesses in the system *hardware* (resource scarcity) and software (*tangible*- guidelines and procedures and *intangible*- leadership and actor relationships) led to the emergence of undesired properties. Both hospitals had comparable system hardware and tangible software, but differences in intangible software contributed to variations in priority setting practices. For example, good leadership and actor relations in one hospital lead to better inclusion of stakeholders and perceptions of fairness while weak leadership, heightened tensions among actors and less inclusive processes in the other hospital lead to distrust and perceptions of unfairness.

RECOMMENDATIONS: The capacity of hospitals to set priorities should be improved across the interacting aspects of organizational hardware, and tangible and intangible software. Interventions should however recognize that hospitals are CASs. Rather than rectifying isolated aspects of the system, they should endeavor to create conditions for productive emergence.

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Finally, I am forever grateful to my wife Ireen, son Andile, my parents and siblings, for their patience, support and understanding.

This thesis is dedicated to my dear wife, Ireen Mueni,

and our son, Andile Barasa.

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LIST OF ABBREVIATIONS

MOH — Ministry of Health

MOPHS — Ministry of Public Health and Sanitation

MOMS — Ministry of Medical Services

CEA — Cost-Effectiveness Analysis

PBMA — Programme Budgeting and Marginal Analysis

MTEF — Medium Term Expenditure Framework

GDP — Gross Domestic Product

EBM — Evidence Based Medicine

AIE — Authority to Incur Expenditure

HMT — Health Management Team

HMC — Health Management Committee

EEC — Executive Expenditure Committee

MTC — Medicine and Therapeutic Committee

KEMSA — Kenya Medical Supplies Agency

FIF — Facility Investment Fund

HMSF — Hospital Management Services Fund

CAS — Complex Adaptive Systems

DHMT — District Health Management Team

AOP — Annual Operational Plan

KEPH — Kenya Essential Package of Health

CHAPTER I: INTRODUCTION TO THE THESIS

1.1 INTRODUCTION

Priority setting is a term that is used in healthcare to refer to the distribution of resources among competing services, patients or patient groups (Mckneally et al. 1997). It has been identified as one of the major challenges facing health care decision makers worldwide given the reality of unlimited demand for healthcare against a background of resource scarcity (Gibson et al. 2004; Ham & Coulter 2000; Singer 2000). It is particularly challenging in developing countries where the resource gap is wider (Kapiriri & Martin 2007). Priority setting occurs at different levels of the health system namely 1) the macro-level (national, provincial) 2) meso level (regional health authority, organizational) and 3) micro-level (clinical programs, patient level) (Mcdonald & Ollerenshaw 2011).

Research on priority setting in healthcare has mainly focused on the macro (health system) or micro (bedside) policy-making levels (Martin et al. 2003) and neglected the meso (organizational) level. Specifically in developing countries, there is a dearth of literature on priority setting at the hospital level. This is evident in a recent systematic review of priority setting practices in developing countries in which only one paper documented hospital level priority setting (Youngkong et al. 2009). This is surprising given the key role the public hospital plays in developing country health systems (1.3.2).

The focus of this thesis is priority setting in public hospitals in Kenya. Using case study methodology, I set out to examine and evaluate the priority setting practices in county hospitals in Kenya to generate an understanding of the factors that come into play, so as to inform policy recommendations to improve priority setting in these hospitals.

1.2 RESEARCH PURPOSE

This research set out with a descriptive-explanatory purpose on the one hand, and a normative or evaluative purpose on the other (Gilson 2012). Using case study approaches, the study describes priority setting practices in the case study hospitals and seeks to identify factors that influence this practice and explain these interactions. To do this, the study employs a conceptual framework that is developed from a synthesis of literature (3.3) and theories of organizational dynamics discussed in chapter four. This is the descriptive-explanatory element. The study also evaluates priority setting practices using a framework that is again developed from a synthesis of literature (3.3). This is the normative/evaluative element. The thesis is thus broadly guided by the approach proposed by Martin and Singer (2003) on improving priority setting in healthcare organizations (Figure 1.1). Martin and Singer's framework proposes that

efforts should go into three critical steps namely: 1) critical description of priority setting processes using case study methods; 2) evaluating priority setting processes using an ethical framework; and 3) action research to improve priority setting based on the findings in the first two steps.

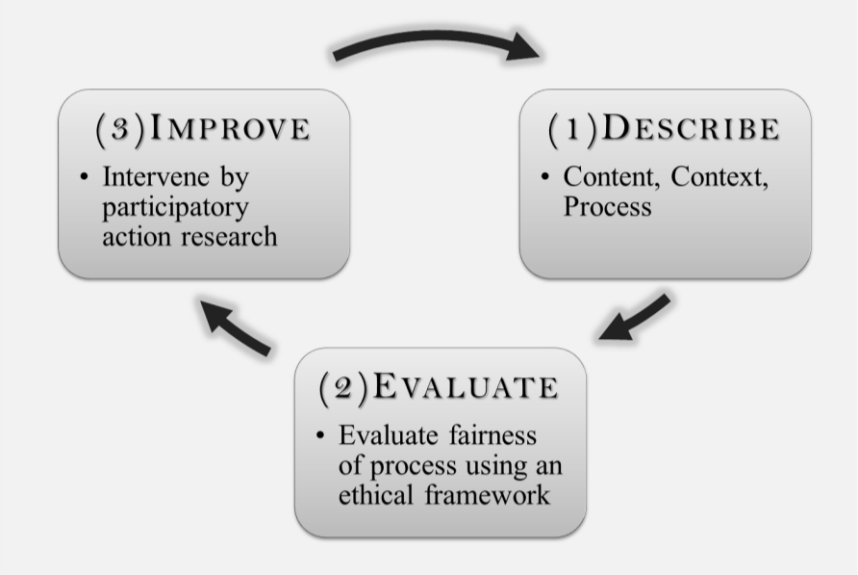


Figure 1. 1: Framework for improving priority setting in healthcare organizations (Martin and Singer 2003)

While the thesis will focus on step one and two, it is anticipated that findings from these two steps will form the basis for recommendations for potential policy interventions to improve priority setting practices in public hospitals in Kenya. The next section will outline the study aim, objectives and research questions.

1.3 THE STUDY AIM, OBJECTIVES AND QUESTIONS

1.3.1 Research Focus

This research focuses on how decisions about healthcare priorities and resource allocation to departments and service areas are made in county hospitals in Kenya. Specifically, this work critically examines and evaluates how the process and content of priority setting is influenced by the context and actors in these hospitals. Finally, this work identifies and proposes strategies for improving priority setting practices in county hospitals in Kenya.

1.3.2 Research Justification

The performance of health systems is dependent to a significant extent on how well they use resources available to them (World Bank 1993). Because the demand for health services outstrips health care resources, priority setting is a key determinant of health system performance (Martin & Singer 2003). As pointed out in section 1.1, whereas priority setting occurs at all levels of the health system (macro, meso and micro), research has mainly focused on macro and micro level processes and hardly on meso level and specifically not in hospitals (Martin et al. 2003). This is perhaps surprising for three reasons:

1. Health reforms in both developed and developing countries have included decentralization as a key component (Segall 2003); in developing countries, decentralization has focused on district health systems with the aim of gradually transferring the process of decision making and management of health resources from central ministries of health at the national level to districts (Oyaya & Rifkin 2003). District health systems are composed of primary health care and referral hospitals, with referral hospitals forming the focal point of administration of the entire district health system.

2. Hospitals absorb a significant proportion of resources available in the health sector, with estimates in both developed and developing countries showing that they consume between 30% to 50% of funds allocated to the health ministry (Mills 1990; Martin et al. 2003). In Kenya for example, it is estimated that public hospitals consume over 50% of the healthcare budget (Glenngård & Maina 2007; Chuma et al. 2012).

3. Hospitals form an important avenue for the delivery of key curative interventions and it has been suggested that if well-functioning, hospitals in developing countries have the potential to reduce the mortality in the areas they serve by between 3% and 30% (English et al. 2004). How these hospitals set their priorities and allocate resources to competing health needs is therefore of prime importance.

There is however a dearth of literature on hospital priority setting in developing countries and specifically in Africa. The only documented case of hospital priority setting is that of a national referral hospital in Uganda (Kapiriri & Martin 2006). National referral hospitals and lower level (first referral) public hospitals are different in a number of ways given that the former are typically semi-autonomous institutions whose operations, management structures, resources and target users are very different from the latter. There is therefore no documented case of priority setting practice in a typical public hospital in

Africa and Kenya in particular. Priority setting in developing countries, rather than being explicit and systematic, is often ad hoc and based on historical allocation (Youngkong et al. 2009). Health system goals are hence achieved by chance rather than by design. There is therefore a need to improve priority setting processes in developing country institutions (Kapiriri & Martin 2007).

To improve the priority setting in public hospitals in Kenya, it is therefore imperative to first gain an understanding of what goes on in these hospitals. This will involve describing the priority setting practices and evaluating them so as to identify strengths and weakness which can inform the design of interventions for improvement. Section 1.3.3 and 1.3.4 will outline the objectives and research questions of the study respectively.

1.3.3 Research Objectives

The aim of this work is to describe and evaluate the priority setting practices in county hospitals in Kenya. The specific objectives are:

1. To explore and describe priority setting practices in county hospitals in Kenya
2. To critically examine the influence of contextual factors and actor and power relations on the content and process of priority setting in county hospitals in Kenya
3. To evaluate priority setting practices in county hospitals in Kenya
4. To identify and propose strategies for improving priority setting practices in County hospitals in Kenya

1.3.4 Research Questions

Overarching Research Question

The overarching research question is: How are healthcare priorities set in county hospitals in Kenya, what factors influence this practice and how can the process be improved?

Sub-Questions

The sub-questions for the study are:

1. What are the current priority setting practices in county hospitals in Kenya?
2. How are healthcare priorities set in county hospitals in Kenya?
3. How do the hospital context, actors and practices of power influence the content and process of priority-setting in county hospitals in Kenya?
4. How can priority setting practices in county hospitals in Kenya be improved?

The next section will provide a background of Kenya, the country that forms the setting of this research.

1.4 BACKGROUND: KENYA

1.4.1 Geographic, Demographic and Socio-Economic Information

Kenya is an African country situated on the eastern region of the continent with Uganda bordering it to the west, Ethiopia to the north, Tanzania to the south, Somalia to the northeast, Sudan to the northwest, and the Indian Ocean to the southeast (Figure 1.2).

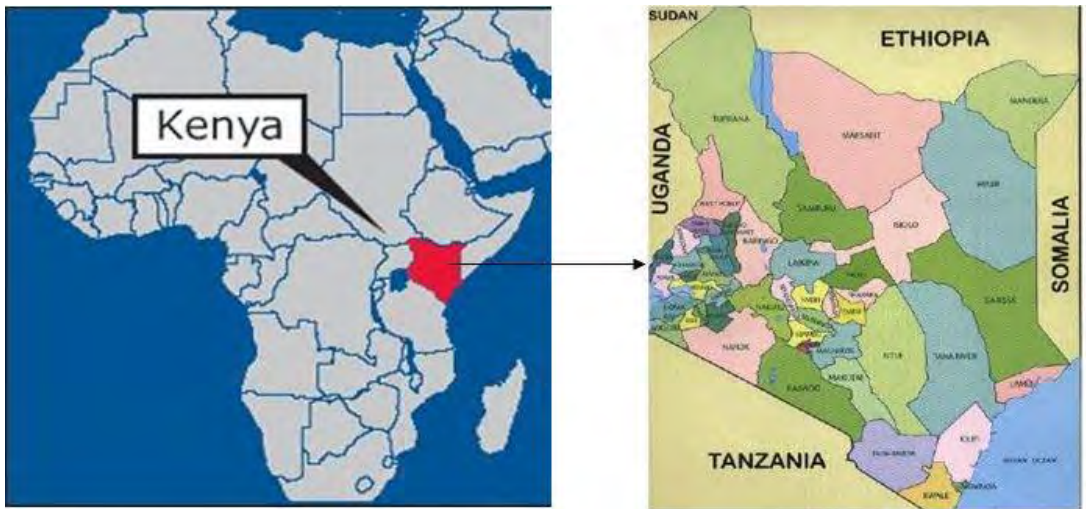


Figure 1. 2: Map of Africa showing the location of Kenya

According to the Kenya National Bureau of Statistics (KNBS), the country has an estimated population of about 42 million (NCPD 2013). Table 1 outlines some relevant socio-economic and demographic indicators of the county. Until recently, and at the time of the research work that forms the basis of this thesis, the country operated under a centralized system of government and was divided into eight administrative provinces, and 254 districts. However, with the coming into effect of a new constitution after the March 2013 general election, Kenya adopted a devolved system of government (GOK 2010). In this new system, the country has two governance levels; the national government, and 47 devolved county governments. With a per capita Gross Domestic Product (GDP) of US $ 475 in 2013, Kenya is considered a low income country (Kenya National Bureau of statistics 2014). Table 1:1 summarizes key demographic and health indicators for Kenya.

Table 1. 1: Demographic, Socio-Economic and health indicators

INDICATOR	VALUE OF INDICATOR/UNITS
Demographics (National Council for Population and Development 2013)	
Population size (2014)	42 million
Annual population growth rate	2.4%
Population ages 0-14 (% of total)	42.8%
Population ages above 65 (% of total)	3.5%
Social and Economic indices (World Bank 2014)	
GDP	USD 44.1 Billion
GDP growth rate	4.7%
Percent living below poverty line (below 1 US dollar a day)	45.9%
Literacy rate	72.2%
Health indices (Ministry of Health 2009)	
Under five mortality rate	73 per 1000
Maternal mortality	448 per 100,000
Life expectancy at birth	61.1 years

While for a long time the leading causes of mortality and morbidity in Kenya have included communicable diseases such as malaria, HIV and AIDS, tuberculosis, diarrheal diseases and respiratory diseases, the recent past has seen increasing contribution of non-communicable diseases such as such as hypertension, heart disease, diabetes and cancer to the country's mortality and morbidity. The next section will present background information on the Kenyan health system.

1.4.2 The Health System in Kenya and Basic Health Indicators

The Kenyan health system is pluralistic with prominent roles played by both the public and private sector in the financing and provision of health services. At the time of doing the research work for this thesis, the health sector was overseen by the Ministry of Medical Services (MoMS) and the Ministry Public Health and Sanitation (MoPHS) which were responsible for all health system functions. The sector was however significantly decentralized with the district health system as the focal point. The district health system was managed by District Health Management Teams (DHMTs) (Ndavi et al. 2009). The core function of the DHMTs was to oversee all health sector activities within the districts and included the management and supervision of district hospitals and rural health facilities (sub-district hospitals, health centers, and dispensaries) (Ndavi et al. 2009). The DHMTs were expected to plan and coordinate health

activities, and ensure that health policies were implemented, resources were well utilized, quality standards were upheld, and performance was monitored and evaluated for better results (Ndavi et al. 2009).

At the time of writing this thesis, the country has transitioned into a devolved system of government with a central government and 47 semi-autonomous units called counties (GOK 2010; KPMG 2013). Under this new governance structure, the health system is structured such that the central Ministry of Health (MOH) has retained policy making and regulatory roles while responsibilities such as allocation and managing health care resources and service provision have been transferred to county health systems (KPMG 2013; Ministry of Health 2013a). Under this new dispensation, the previous two health ministries have been merged into one.

The public healthcare delivery system is organized into four tiers, namely community, primary care, county referral and national referral (Figure 1.3). Community health services include all community based demand creation activities that are guided by the MOH community strategy (Ministry of Health 2013b; Ministry of Health 2011). Primary healthcare include services provided by public and private maternity homes, health centers and dispensaries. County referral services include first level referral hospitals that are managed by a given county. These are referred to as county hospitals and are the focus of this study. National referral services are comprised of (formerly) provincial and national level facilities, where tertiary referral services are provided.

Figure 1. 3: Service provision structure in the Kenyan public health sector

1.4.3 Priority Setting in the Kenyan Health Sector

Within the Kenyan health sector, the overall policy direction and health development agenda is outlined in the Comprehensive National Health Policy Framework which became operational in 2011 (Ministry of Health 2011). The implementation of this framework is guided by five year national health sector strategic plans (NHSSP). These strategic plans form the overall health sector medium term plans, outlining the strategic objectives that all actors in the sector should work towards (Ministry of Medical Services 2008).

At the time of doing the research work that informs this thesis, the Kenyan Ministries of Health employed a combination of top down and bottom up approaches to planning in the sector (Ministry of Health 1994). At the central Ministries of Health (MOMS and MOPHS), two departments were responsible for planning: the department of technical planning and monitoring which was responsible for providing leadership and guidance on coordinating the identification of health service priorities, and the department of health policy and planning which coordinated with the Ministry of Finance (treasury) to provide guidance on budget allocations. To facilitate achievement of the priorities outlined by the national health sector strategic plans (NHSSP), annual operational plans (AOPs) and respective medium term expenditure frameworks (MTEFs) were put in place (Ministry of Medical Services 2008). The AOP formed the operational plans for the health sector outlining the key outputs the sector would focus on during a defined year (Ministry of Medical Services 2008). The MTEF was and still is the budgeting tool for the government and on-budget partners, and specifies how resources will be allocated across priority outputs (Ministry of Medical Services 2008).

Every year, the central ministry was expected to provide the districts with information on the budget envelope that will be available to them in the next planning year and guidelines on allocations to activities/budget items (medium term expenditure framework - MTEF). This information was prepared by the department of health policy and planning and was to be transmitted to the districts through the department of technical planning and monitoring. Planning for the AOPs for the next year was to begin in February of each year (Ministry of Health & Health 2005). This was supposed to be a bottom-up process, starting with the district health plans (DHP) which included hospital plans, plans for rural facilities and the plans drafted by the divisions that manage and support various components of the Kenya Essential Package for Health (KEPH) (Ministry of Health & Health 2005). This process was to be coordinated by the provincial medical offices (PMO) and by department heads (for their respective divisions), using the planning guidelines and financial ceilings provided by central health ministries. Plans at these levels were

to be forwarded to the central Ministries of Health to compile and present a comprehensive AOP for the entire health sector for endorsement by the stakeholders (Ministry of Health & Health 2005).

However, allocation decisions at the central Ministries of Health have been argued to be based predominantly on political influence and lobbying (Briscombe et al. 2010). Only about 10 % of these resources were allocated using an objective resource allocation formula (Briscombe et al. 2010). This resource allocation formula used weighted variables to reflect the relative need of districts in the county. The formula (Figure 1.4) was only applied to the recurrent budget in allocating money to hospitals and primary healthcare facilities (Briscombe et al. 2010), while other allocations, such as capital expenditures were based on lobbying and persuasion.

District Hospitals		**Rural Health Facilities**	
Variable	**Weight**	**Variable**	**Weight**
Poverty rate	0.20	Infrastructure	0.15
Bed use	0.40	Under -5 population	0.20
Outpatient case load	0.20	Poverty rate	0.30
Accident area	0.05	AIDS case	0.05
Field cost	0.15	Female of reproductive age (15 to 49)	0.20
		Area of district (sq.km)	0.10
Total	**1.00**	**Total**	**1.00**

Figure 1. 4: Resource Allocation Formula for the Kenyan Public Health Sector (Briscombe 2010)

There are no stated criteria for allocating resources among competing services and/or interventions. However, national health system priorities are laid out in the third national health sector strategic plan (NHSSP III) (Ministry of Health 2013b). National priorities, according to this policy document, are based on the Kenya Essential Package for Health (KEPH) and international health priorities such as the Millennium Development Goals (MDGs). These national priorities are translated into regional and district level targets and incorporated in AOPs to guide local priority setting and resource allocation (Ministry of Health & Health 2005).

With the advent of the new constitutional dispensation, the sector is currently undergoing a transition to align itself with the devolved system of government. It remains to be seen how the structure and process of planning in the health sector will be organized given that these arrangements had not been agreed on at the time of writing this thesis.

Hospital Planning and Priority Setting

At the time of conducting research for this thesis, public hospitals were required to develop AOPs which were incorporated in the district health plans to be forwarded to the provincial level and eventually to the central MOMS (Ministry of Health & Health 2005). Planning within the hospital was to be conducted by the hospital management team (HMT) and overseen by the hospital management committees (HMC) (Luoma et al. 2010; Ministry of Medical Services 2011). There were no official guidelines in place on how priority setting should be conducted in district hospitals (now called county hospitals). There is also no evidence/literature on how the priority setting process is actually carried out within hospitals in Kenya. While it is anticipated that the planning process in public hospitals, specifically the requirement to submit plans to the national government, will change to align with the devolved system of government, new guidelines had not been implemented at the time of writing this thesis. The next section will present the structure of the thesis.

1.5 THE STRUCTURE OF THE THESIS

The thesis is structured into ten chapters. The current chapter has introduced the thesis, presenting an overview of the focus of the work, research justification, objectives and questions. The chapter has also provided background information about the country (Kenya) where the research work has been conducted as well as what is known about priority setting in the Kenyan health system.

Chapter two presents the theoretical foundations and approaches to priority setting in healthcare. In this chapter, it will be seen that priority setting approaches in healthcare draw from and are grounded in a range of theoretical ideas from a range of disciplines. This chapter also presents the evolution of priority setting thought over the years to current thinking on the topic.

In chapter three, I present two literature reviews that summarize current knowledge on priority setting practices relevant to hospitals and develop a framework for describing and evaluating meso level priority setting practices.

In chapter four, I present a summary of organizational theories and narrow down on those relevant to healthcare organizations. This is considered relevant given that the thesis sets out to understand the micro practices of priority setting in an organizational setting; the hospital.

Chapter five presents the methods used to carry out the research. Specifically, I introduce the case study approach, which I employed for this study, using 2 county hospitals as study cases.

Chapter six is the first of 4 result chapters of this thesis. This chapter presents a description of priority setting practices in each of the case study hospitals, focusing both on the formal processes (what should happen) and what happens in practice. The second results chapter, chapter seven presents findings on the interactions between contextual factors and priority setting practices, while chapter eight explores the influence of power and actor dynamics on priority setting processes in the case study hospitals. Chapter nine, the last results chapter presents an evaluation of priority setting practices in the case study hospitals using the evaluative framework developed in chapter three (3.3). Finally, chapter ten presents a discussion of the findings as well as policy and research implications.

1.6 CHAPTER SUMMARY

This chapter is the first of ten chapters of this thesis. I have introduced the concept of priority setting and highlighted its significance in improving health systems delivery. It has emerged that, while priority setting occurs at all levels of the healthcare system, meso level priority setting, particularly for hospitals, has received little research attention. The overarching objective of this thesis is to describe and evaluate priority setting practices in county hospitals in Kenya. It is anticipated that findings of this work will add to the scant body of knowledge on priority setting practices in public hospitals in developing countries. More importantly, the findings will form the basis for policy recommendations to improve priority setting in public hospitals in Kenya. In the next chapter, I will present a review of available literature on priority setting practices in hospitals.

CHAPTER II: APPROACHES TO PRIORITY SETTING IN HEALTH CARE

2. 1 INTRODUCTION

In the previous chapter, I introduced the focus and purpose of this thesis, priority setting in hospitals. In this chapter, I will seek to unpack the concept of priority setting in healthcare by exploring and presenting the theoretical approaches to healthcare priority setting and paradigms that guide the practice. This chapter is structured into four sections. After the introduction, I will present the various theoretical approaches to priority setting in healthcare. This is then followed by a discussion of the evolution of priority setting thought (or paradigms) in healthcare. The last section provides a summary of the chapter.

2. 2 THEORETICAL APPROACHES TO PRIORITY SETTING

An examination of theoretical approaches to priority setting reveals that they are derived from specific disciplines (Sibbald 2008; Maluka 2011). Each of these approaches proposes an alternative framework for priority setting, represented by a specific priority setting goal (Table 2.1). Even though the frameworks proposed by these disciplines can be complementary, their underlying values often conflict. This section will present and discuss each of these approaches, highlighting their assumptions and applicability in healthcare priority setting.

Table 2. 1: Discipline specific approaches to priority setting and their goals

APPROACH	GOAL
Economics	Efficiency
Evidence based medicine	Effectiveness
Legal approaches	Reasonableness
Political science	Negotiation
Philosophy	Justice

2.2.1 Economic Approaches

The economic approach focuses on achieving efficiency as an outcome of the priority setting process. An economic approach seeks to solve the problem of scarcity and choice by identifying alternatives that maximize outcomes subject to resource constraints (Gold et al. 1996; Drummond et al. 2005). The

fundamental feature of this approach to priority setting is that resources should be used in a manner that maximizes health benefits (Donaldson & Mooney 1991). Two economic methods that have been used extensively to guide resource allocation in health care are economic evaluation and programme budgeting and marginal analysis (PBMA) (Mitton & Donaldson 2003); these will be discussed in turn.

Economic Evaluation

Economic evaluation refers to the comparative analysis of alternative courses of action in terms of both costs and consequences (Drummond et al. 2005). It is a technique that was developed to provide a framework for decision making when choices have to be made between several courses of action (Drummond et al. 2005; Fox-Rushby & Cairns 2005). Economic evaluation compares competing health care interventions with the objective of choosing the alternative that is more efficient. Economic evaluation methods seek to maximize population health benefits within a budget constraint by comparing competing alternatives in terms of their costs and benefits. Alternatives that yield the most benefits per unit cost, at the margin, are considered more cost-effective than those that yield lesser benefits per unit cost. There are different types of economic evaluation methodologies, characterized by the type of efficiency question (allocative or technical) they seek to answer and the measurement of consequences (Table 2.2). Whereas all forms of economic evaluation measure and present costs in monetary units, there are differences in the measurement of consequences (Table 2.2) (Drummond et al. 2005). By analyzing the efficiency of interventions, and recommending the adoption of more efficient interventions, economic evaluation provides a framework for setting priorities within health care.

Table 2. 2: Types of economic evaluation

TYPE OF ECONOMIC EVALUATION	UNITS USED TO MEASURE BENEFITS	EFFICIENCY QUESTION ADDRESSED
Cost-effectiveness analysis	Natural units e.g. number of infections	Technical efficiency
Cost-utility analysis	Disability adjusted life years (DALYs) or Quality adjusted life years (QALYs)	Allocative efficiency
Cost-benefit analysis	Monetary	Allocative efficiency

Cost-effectiveness analysis (CEA), which in this review shall subsequently be used to refer to both cost-utility and cost-effectiveness analyses as is common practice in literature, has been used as a tool to allocate resources in both developing and developed countries (Baltussen et al. 2005). The UK National Institute of Health and Clinical Excellence (NICE) is an example of the institutionalization of economics in health care decision making (Walker et al. 2007). CEA has become an integral component of the

methods used by health technology assessments in most developed countries including Canada, Australia, France and Sweden (Baltussen et al. 2005).

CEA has also found use in priority setting in developing countries (Shillcutt et al. 2009). Priority setting processes such as the World Bank Health Sector Priorities Review (HSPR) (World Bank 1993), the WHO Choosing Interventions that are Cost-Effective (WHO-CHOICE) initiative (World Health Organization 2003) and the second edition of the Disease Control Priorities Project (DCP2) (Jamison et al. 2006) have all employed CEA. CEA has however had very limited impact on decision making in practice (Drummond et al. 2007; Hoffmann & Graf von der Schulenburg 2000; Hoffman et al. 2012). This is because of a number of technical and conceptual problems associated with the use of CEA in decision making (Drummond et al. 2007; Hoffmann & Graf von der Schulenburg 2000).

One of the technical barriers to the use of CEA is the perspective used in the analysis (Hauck et al. 2004). Analyses that use narrow perspectives (such as the perspective of the funder) limit the use of CEA to priority setting. Another practical challenge is the generalizability of the results (Hauck et al. 2004). Whereas decision makers in a particular setting may wish to use analyses from other settings to make decisions, available CEA are hardly generalizable. These studies may be based on economic data that are not transferable from one setting to another. Further areas of concern are how parameter and model uncertainty can be incorporated into the estimated cost-effectiveness ratio, and how the consequences of these uncertainties can be communicated to the users of studies (Briggs 1999).

In developing countries, resources hamper the conduct of CEA for all interventions under consideration. In these settings, it is problematic to obtain good quality data to use in the analysis and the technical capacity to conduct economic evaluations is limited. Also, interventions may be found to be cost-effective in one setting and not in another, and vice versa.

There are also ethical objections to CEA. This approach does not give priority to the worst off (sickest) patients; benefits, including trivial ones, are aggregated such that curing toothaches for many people may be considered more cost-effective than saving a few lives. In failing to incorporate multiple criteria and other societal values, CEA have given results that are unacceptable to the society (Hadorn 1991). An example of this is the attempt by state of Oregon in the United States to develop a priority list of health care services to be covered by Medicaid in 1990 (Hadorn 1991). In this list, interventions were subjected to CEA and rank ordered based on their incremental cost-effectiveness ratios (ICERs). The initial list was met with public outcry and eventually withdrawn due to the perception that it ranked “less important”

interventions higher than "more important" ones (Hadorn 1991). For example tooth capping was ranked above appendicectomy (Hadorn 1991). This is explained by the basic mechanics of CEA (Hadorn 1991). Within a CEA framework, health benefits, however measured, and from different interventions are assumed to be of equal value (Nord et al. 2009). Alleviating pain in a number of patients could, in theory, be considered equivalent to saving one life; alleviating pain in more patients than the equivalent amount would yield more health gain than saving one life. This assumption is in direct conflict with the "rule of rescue"; a perceived duty to save endangered life wherever possible (McKie & Richardson 2003). The rule of rescue has been shown to be very compelling and to trump efficiency in decision making not just for life saving interventions but also whenever an identified patient is in need of medical treatment for a non-life-threatening condition such as a fractured arm (Hadorn 1991).

Conceptually, CEA has been criticized for assuming that maximizing health is the only objective function in a health system (Griffin et al. 2008). It has been argued, and demonstrated, that often society expects things beyond health maximization from their health system (Mooney 1998). CEA, as currently practiced, does not recognize this in its analysis. There are also challenges associated with defining valid measures for health gain such as QALYs and DALYs which have been discussed extensively by others (Mooney 1998; Robberstad 2005; Anand & Hanson 1997; Kapiriri et al. 2004; Birch & Gafni 1994; Birch & Gafni 2007).

Another fundamental conceptual challenge to CEA as currently practiced, is that the decision rules ignore affordability and opportunity cost (Birch & Gafni 1992; Cleary & McIntyre 2009). The use of either the cost-effectiveness league table or threshold values does not account for the fact that investing in an alternative judged to be "cost-effective" implies that resources have to be shifted from other services with resultant losses in associated health benefits (opportunity cost) (Gafni & Birch 2006). An economic approach that takes into account the opportunity cost of the allocation decisions is programme budgeting and marginal analysis (PBMA), to which we shall now turn our attention to.

Programme Budgeting and Marginal Analysis (PBMA)

Programme budgeting and marginal analysis (PBMA) is a systematic and explicit priority setting process that operationalizes the economic principles of opportunity cost and the margin (Donaldson & Mitton 2004; Donaldson & Farrar 1993). PBMA is used to determine the optimal mix of a set of healthcare services from a given envelope of resources. The objective of PBMA is to enable decision makers to identify the most efficient use of resources such that health outcomes are maximized (Donaldson & Farrar

1993). The framework can be operationalized by asking five questions pertaining to the use of resources (Grocott 2009):

1. What resources are available in total?
2. In what ways are these resources currently spent?
3. What are the main candidates for more resources and what would be their effectiveness?
4. Are there any areas of care that could be provided to the same level of effectiveness but with fewer resources, so releasing those resources to fund candidates from (3) (i.e. addressing technical efficiency)?
5. Are there areas of care which, despite being effective, should have fewer resources because a proposal from (3) is more effective (per dollar spent) (i.e. addressing allocative efficiency)?

The first two questions fall under programme budgeting and seek to describe what resources are available and how they have been allocated across programmes of care (Mitton & Donaldson 2001). This information is important given that it highlights areas where resources have been allocated and yet they are not in line with identified priorities and also identifies areas that currently receive limited resources and yet have been identified as priority areas. The last three questions fall under marginal analysis, where the potential net marginal gains accruing to changes in resource levels are considered (Mitton & Donaldson 2001).

One of the strengths of PBMA is that it recognizes the opportunity cost of resource allocation decisions (Tsourapas & Frew 2011). By analyzing the forgone benefits when disinvestments are made, decisions are made that, in theory, maximize the net benefits from resource allocations. Given that the process considers who gets the resources, in theory it can incorporate ethical considerations such as equity. Another advantage is that PBMA pragmatically weighs research evidence with local data and expert opinion (Mitton & Donaldson 2001). PBMA has also been advocated as a method that can help bridge the gap between health practitioners and managers on priority setting (Ruta et al. 2005). While managers are focused on achieving efficiency and overall organizational goals, front line practitioners are concerned with giving the best care to the patients in front of them regardless of the resources available. By providing a framework for collaborative and inclusive decision making PBMA potentially bridges this gap by harnessing both the perspectives of managers and frontline practitioners (Ruta et al. 2005). Other advantages of PBMA are transparency and inclusivity (Ruta et al. 2005).

Drawbacks of PBMA include the fact that it is a data intensive process, requiring data on costs and outcomes of programmes that are sometimes unavailable (Donaldson & Mooney 1991). This problem is especially prevalent in developing countries (Tsourapas & Frew 2011). Another key challenge of PBMA is the fit of the framework within different organizational contexts (Tsourapas & Frew 2011). Whether and how a systematic priority setting process is implemented is influenced by factors such as resource availability, buy-in, and a culture that is supportive of proactive change (Tsourapas & Frew 2011).

An economic approach to healthcare priority setting has a number of advantages. For example, this approach requires that decision makers explicitly define the objectives of the priority setting process (Hauck et al. 2004). It also allows the explicit modeling of the conflicts that arise when priority setting is undertaken, and hence makes the trade-offs of decision making explicit (Hauck et al. 2004). The economic approach can also, in principle, incorporate both equity concerns as well as other practical constraints that influence decisions (Hauck et al. 2004). However, operationalizing these factors is harder in practice and hence economic analysis is unlikely to capture all of them neatly. The economic approach should hence be just one of the considerations in priority setting and should not be used in isolation from other key determinants of decision making (Hauck et al. 2004). Another disciplinary contribution to priority setting is evidence based medicine, which will be discussed next.

2. 2.2 Evidence Based Medicine

Evidence based medicine (EBM) has been defined as *"the conscientious and judicious use of current best medicine from clinical care research in the management of individual patients"* (Haynes et al. 1996). EBM focuses on selecting and implementing interventions with proven effectiveness (Baltussen & Niessen 2006). When resources are scarce, evidence on the clinical effectiveness of interventions can inform decision makers' allocation decisions such that waste is minimized by avoiding ineffective interventions and maximizing use of resources on what works. This approach was institutionalized by the Cochrane collaboration which produces and disseminates systematic reviews of healthcare interventions (Claridge & Fabian 2005).

Clinical guidelines have been identified as an important avenue for promoting the use of effective care (Eccles & Mason 2001; Grimshaw et al. 2004). Clinical guidelines have found increasing use in both developed and developing countries and are advocated as a way to promote interventions of proven efficacy while discouraging ineffective care (Eccles & Mason 2001; Grimshaw et al. 2004). While EBM has the advantage of focusing resources on what works and minimizing waste by avoiding ineffective interventions, its use alone ignores key considerations such as affordability, opportunity cost and

efficiency. For example, while a specific drug might be the most effective alternative for treating a specific condition, if it also happens to be very expensive, adopting it into the national treatment guidelines might mean denying a larger number of people access because the treatment is not affordable. Political science has also contributed to theories on decision making, and shall be discussed next.

2.2.3 Political Science Approaches

Priority setting processes involve a range of actors arbitrating between competing needs, often with varying and competing interests (Ham & Glenn 2003). The process of priority setting is hence complex, involving "pluralistic bargaining between different lobbies, modified by shifting political judgments made in the light of changing pressures" (Klein 1993). Political scientists therefore see priority setting as a policy making process where political forces interact to produce negotiated policy (Sibbald 2008). It has been argued that the context of policy making and potential influences of theories of policy making are relevant to understating priority setting (Goddard et al. 2006). Goddard (2006) argues that analyzing priority setting using political theories is potentially valuable. A number of relevant political theories propose how policy making (and hence, priority setting) ought to be done.

One of these theories is the *rational choice theory* of policy making (Scott 2000). This approach prescribes an extensive evaluation of alternatives and making choices that result in maximizing intended outcomes (Scott 2000). This theory is closely related to the economic approach of maximizing utility or wellbeing, and assumes that people are rational beings, who will comprehensively analyze information on available options and choose the option that maximizes their interests (the rational choice).

Closely related to rational choice theory is the theory of *bounded rationality*. This theory holds that while people intend to make rational decisions, it is not always possible to do so. While rationality characterizes decision making generally, often at certain points rationality fails (Jones 1999). Like rational choice theory, bounded rationality assumes that decision makers are goal-oriented, but in addition, bounded rationality appreciates the decision makers cognitive limitations (Jones 1999). Under this theory, both knowledge and cognitive limitations of the decision maker are taken into account, and considered to impose limits on solving complex decision making problems (Simon 1972). Rather than aiming at maximizing outcomes therefore, decision makers instead settle for "satisficing" –aiming at achieving at least some minimum of utility (Simon 1972).

Another relevant political theory is *incrementalism*. This theory proposes that decision making should be in the form of many small (and often unplanned) steps rather than few (extensively planned) large steps

(Mintzberg et al. 1976). Incrementalism sees policy changes occurring as a result of a combination of small changes (Etzioni 1967).

Lastly the theory of *public choice* also tries to explain decision making by policy makers. According to this theory, decision makers are guided by self-interest and rationality (Buchanan & Tollison 1972). Political outcomes are hence seen to be as a result of bargaining between governments (policy producers) and voters (policy consumers). Under this arrangement, all actors need to be at the decision making table in order to make informed decisions. Theories on democratic process are therefore emphasized under this model of decision making (Farrelly 2004). Next I will discuss philosophical approaches.

2.2.4 Philosophical Approaches

A number of philosophical theories have attempted to provide a normative basis for the allocation of resources in society. These theories have focused on justice, and have hence been called theories of justice (Beauchamp & Childress 1994). The three main theories of justice relevant to priority setting are utilitarianism, libertarianism, and egalitarianism. Each of these philosophical approaches, however, argues for different distributive principles for the allocation of health care resources.

Utilitarianism is a philosophical theory of justice that aims at the attainment of the maximum possible happiness of a society as a whole (Bentham 1988). One of its earliest proponents, Jeremy Bentham, held that "the highest principle of morality, whether personal or political, is to maximize the general welfare or collective happiness or the overall balance between pleasure and pain; in a phrase, to maximize utility" (Bentham 1988; Sandel 2009). From a utilitarian perspective healthcare resources should be allocated in a manner that maximizes the aggregate utility of the society. This resonates with the *welfarist* (or extra-welfarist in healthcare) economic approach, where resources are to be allocated in a manner that maximizes aggregate utility (or health outcomes in health care) (Gold et al. 1996).

Libertarianism on the other hand is founded on the principles of the right to personal freedom and private property (Sandel 2009). The absolute respect for individual property held by libertarians prevents coerced redistribution of private property (Nozick 1974). A healthcare system founded on libertarian ideologies is therefore based on free market principles. In such a system, every individual pays for his own individual medical needs and the redistribution of resources to contribute to the provision of services for the medical needs of those who are disadvantaged by the natural or social lottery is not justified (Nozick 1974). The libertarian model of justice proposes an individual oriented healthcare system where the individual medical need is the focus.

Lastly *egalitarianism* is based on the fundamental belief of equality of human beings and the creation of possibilities for people to become as equal to others as possible, including with regard to health and well-being (Sandel 2009). The preferred solution is the one with the most equal distribution of resources. In healthcare, egalitarianism can be operationalized differently depending on the meaning given to equality in the sense that it can aim to achieve equal health status for all, equal well-being for all, equal use of health care services for individuals with equal medical needs, or equal access to health care services.

Philosophical approaches however have been criticized for not providing practical approaches to priority setting; for being too abstract to be applied in concrete decision making (Williams et al. 1996). Also, it has been observed that given that different philosophical approaches emphasize different values and conclusions it is problematic to have consensus about which one is right (Sibbald 2008). Legal approaches will be discussed next.

2. 2.5 Legal Approaches

Legal approaches focus on the reasonableness of allocation decisions within the framework of the law (Sibbald 2008). It entails specifying healthcare benefits that specified groups of the population are entitled to and enshrining this in the laws of a country. For example, in Ontario Canada, accountability agreements are legally binding agreements between the Ministry of Health and Long-Term Care, the local health integration networks (LHIN) and the hospital for delivery of services within a set budget (Reeleder et al. 2008). In Norway, the Norwegian Patients' Rights Act guarantees the population equal access to necessary specialized care (Kapiriri et al. 2007). In Kenya, the Kenyan constitution through the bill of rights guarantees every Kenyan the right to the highest attainable standards of health which must be progressively realized (GOK 2010). The constitution further prohibits the denial of emergency care to all citizens, in both public and private facilities, on account of lack of ability to pay (GOK 2010). According to the legal approach therefore, priority involves meeting the minimum requirements specified by legislation within the jurisdiction where the priority setting is occurring.

2. 2.6 Interdisciplinary Approaches

The approaches discussed so far are grounded in specific disciplines and often focus on one specific goal of priority setting. In an attempt to incorporate more goals, multi-disciplinary approaches have evolved. One such approach is health technology assessment (HTA). HTA has been defined as *"the systematic evaluation of properties, effects, and/or impacts of health-care technology. It may address the direct, intended consequences of technologies as well as their indirect, unintended consequences. Its main purpose is to inform technology-related policy-making in health care"* (World Health Organization

2011). HTA is usually conducted by interdisciplinary groups using frameworks drawn from a variety of methods (World Health Organization 2011). These methods include EBM and CEA, as well as incorporating ethics and other social values (Sibbald 2008). HTA is used in a number of countries to make priority setting decisions in healthcare. Often the HTA role is conducted by an organization that is set up specifically for this purpose. For example, in the United Kingdom, the National Institute for health and Clinical Excellence (NICE) conducts HTA for health interventions and advices the National Health Service (NHS) on decisions on their adoption (Walker et al. 2007). The Canadian Agency for Drugs and Technologies in Health (CADTH) is a primary source of HTA in Canada (Sibbald 2008).

There have also been approaches to develop multi-criteria approaches to decision making in healthcare. Multi-criteria decision analysis approaches have been proposed as a potential means to solve the priority setting problem while considering a range of relevant criteria (Baltussen & Niessen 2006). An example of multi-criteria approaches used in priority setting is the use of discrete choice experiments (DCE) to identify criteria for decision making (Baltussen & Niessen 2006). In a DCE, respondents select their preferred alternative (health service or intervention) from a set of hypothetical alternatives, each consisting of a range of criteria that describe them, with each criterion varying over a range of levels (Amaya-Amaya et al. 2008; Mangham et al. 2009). The criteria are similar for each scenario but the levels describing each criterion vary. Analysis of the choices of respondents provides information of the importance of each criteria as well as levels (Amaya-Amaya et al. 2008). DCEs have been explored experimentally to identify criteria for priority setting and rank order interventions in Ghana (Baltussen et al. 2006), and to identify priorities in an HIV programme in Thailand (Youngkong et al. 2010) and a lung health programme in Nepal (Baltussen et al. 2007). DCEs have also been used to elicit policy maker, public, and health professional preferences for different criteria for priority setting (Koopmanschap & Stolk 2010). Furthermore, the method has been used to elicit the priorities of the public for the service provided by the health system and their priorities for funding and reimbursing decisions for medicines (Mentzakis et al. 2011; Whitty et al. 2011; Diaby et al. 2011).

This section has presented and discussed theoretical foundations of priority setting in healthcare. Thinking about how priority setting should be conducted has however evolved over time informed by attempts at the practical implementation of various approaches and learning from experiences accrued. The next section shall provide a summary of this evolution process of priority setting paradigms.

2. 3 THE EVOLUTION OF PRIORITY SETTING PARADIGMS

Thinking about priority setting has evolved through three fundamental phases (Holm 1998; Mcdonald & Ollerenshaw 2011; Ham & Glenn 2003). The first phase was premised on the notion that the use of a set of rational decision making rules or consequential principles such as CEA could precisely inform a policy maker's choice between competing alternatives and hence determine priorities (Holm 1998). Within this framework, often called *consequentialism,* decisions are deemed to be appropriate if they are consequent on following pre-defined rational rules. Experience with these "rational" systems exposed a number of challenges. Practically the amount of information required to operationalize such systems was enormous, and the impartiality of policy makers could not always be assured (Holm 1998). More fundamentally, there are conceptual problems associated with these "rational" approaches. Key among them is the recognition that the function of the health system, rather than being single and universal, is a complex composite of multiple goals including health maximization, equity, health information and fulfilling a social function (Mooney 1998). It became apparent that balancing these goals against each other is complex and while it was possible for a goal to be identified as more important in specific situations, it was impossible to identify a goal that is more important in all situations (Holm 1998). This rendered the use of simple maximizing formulas as the basis of priority setting unsatisfactory given that such approaches require either a single goal or a systematic way of balancing multiple goals (Holm 1998). Furthermore, it was observed that priority setting is a highly complex, political and value –laden process (Klein 1998; Buse 1999; Bryant 2000). This made it problematic for people to agree on methods, principles or approaches to allocating resources (Mitton & Donaldson 2003).

Arising from these challenges, priority setting thinking evolved into a second phase where focus was now placed on the priority setting process itself rather than the outcomes (Holm 1998; Mcdonald & Ollerenshaw 2011) . This is what is referred to as the *proceduralist* paradigm of priority setting (Jan 2014). It was argued that if priority setting could not be legitimized by the use of specified rational rules, then perhaps an approach that involved the use of "meta-rules" to govern the priority setting process would legitimize the decisions (Holm 1998). This realization lead to the development of multidimensional approaches which embraced ethical, social and political considerations in addition to economics (Patten et al. 2006; Mcdonald & Ollerenshaw 2011). Ethical approaches which emphasize fairness in priority setting processes are a case in point (Daniels 2008) (Daniels and Sabin, 2008). Consequentialism and proceduralism have thus emerged as the main approaches to priority setting in healthcare.

The third (and arguably current) phase of priority setting entails efforts to combine these two approaches. While the distinction between consequential and procedural approaches to priority setting suggests that the two are incompatible, there is growing consensus on the need to combine them (Norheim et al. 2007; Ham & Glenn 2003). Fair procedures can provide a framework for decision making, while consequential principles can provide important inputs for the procedures (Norheim et al. 2007). Norheim and colleagues observe that while people cannot agree on all criteria or principles, literature reveals that indeed there is considerable agreement on some principles, such as allocative efficiency and fairness, and some criteria such as severity of disease, effectiveness, costs, healthy life expectancy and the quality of the evidence used (Norheim et al. 2007). There is therefore considerable scope for developing approaches that combine the use of consequential principles that are widely accepted, with fair processes (Norheim et al. 2007).

2. 4 CHAPTER SUMMARY

In this chapter, I have presented and discussed approaches to priority setting in healthcare. It emerged from the discussion that theoretical approaches to priority setting are derived from a number of disciplines including economics, politics, philosophy, and law. Given that each of these approaches often propose narrow and single considerations in priority setting, interdisciplinary and multi-criteria approaches have been developed and used in some settings. It has also emerged that priority setting thinking has evolved over the years through three phases namely a consequential approach, a procedural approach and more recently, calls for combined approaches. This recent call has arisen from the realization that, far from being considered mutually exclusive approaches, both principles and procedures are important and that frameworks for priority setting in healthcare should endeavor to incorporate both. In the next chapter, I will present two literature reviews that seek to summarize the current evidence on 1) priority setting practice in hospitals and 2) evaluation of priority setting in healthcare.

CHAPTER III: PRIORITY SETTING IN HEALTHCARE: A REVIEW OF LITERATURE

3.1 INTRODUCTION

As outlined section 1.2, this thesis has set out to both describe and evaluate priority setting practices in county hospitals in Kenya. In this chapter, I will present two literature reviews on healthcare priority setting. The first review is a synthesis of empirical literature on priority setting at the hospital level with the aim of describing what is known about priority setting practices and exploring the factors that influence this practice. Based on this review, I develop a conceptual framework for describing and examining priority setting practices in hospitals. This review has already been published (Barasa et al. 2014). The second review draws from theoretical and empirical works on and related to the evaluation of priority setting, with the aim of developing a framework for the evaluation of priority setting practice in healthcare organizations. This second review has been submitted for publication.

3. 2 REVIEW 1: SETTING HEALTHCARE PRIORITIES IN HOSPITALS: A REVIEW OF EMPIRICAL LITERATURE

3. 2.1 Review Methodology

Literature Search

I carried out a literature search in December 2012 in PubMed, EBSCOHOST, Econlit databases, Google scholar, and websites of the World Health Organization (WHO), the World Bank, Management Science for Health (MSH), United States Agency for International Development (USAID) and the Organization for Economic Corporation and Development (OECD). First, I performed a search using the following keywords: 'hospital' and 'priority setting' or 'rationing' or 'health care rationing' or 'planning' or 'decision making' or 'strategic planning' or 'resource allocation' or 'health technology assessment' or 'budgeting'. I also manually searched reference lists of selected papers for relevant papers. The search was limited to studies published in the English language that were available from January 1990 to December 2012. Next, studies were only included in the review if they reported empirical data on priority setting practice in hospitals. In this step, I screened study abstracts using these criteria and subsequently obtained full-text formats for studies deemed relevant. The final inclusion of studies in the review was based on a detailed assessment of the full-text formats (studies for which no full-text format was available were excluded). I then classified the selected studies to five general characteristics: (i) country (ies) where the studies were conducted; (ii) study design; (iii) priority setting activity; and (iv) study objectives.

Analysis of Selected Papers

First, I read through the selected papers to familiarize myself with the studies and identify key ideas and themes. Given the difficulty in comparing and analyzing studies with different objectives, approaches and methods, I found it useful to apply an a priori, policy analysis framework to examine the selected studies. This made it easier to determine what to look for in the papers, organize the extracted data and structure the synthesis of findings. This choice of framework is justified by the fact that priority setting has been considered to be part of the policy process by a number of authors (Goddard et al. 2006; Sibbald 2008; Coulter & Ham 2000). Drawing on the Walt and Gilson policy analysis framework that focuses on four key domains (content, context, process and actors) (Figure 3. 1) (Gold et al. 1996; Drummond et al. 2005), I identified themes and concepts that clustered around each of these main domains. I then imported each of the selected papers to NVIvo version 10 software (QSR International) and coded the text in the papers using this thematic framework. Data were then lifted from their original context and rearranged according to the appropriate thematic reference and summarized in charts. Lastly, I conducted a synthesis and interpretation of each theme and interrelationships between themes.

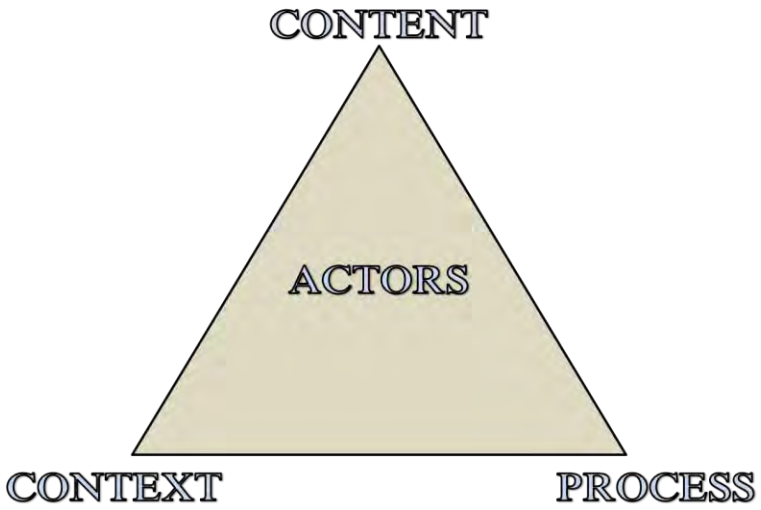


Figure 3. 1: Walt and Gilson Policy Analysis Framework (Walt &Gilson 1994)

3. 2.2 Results

The first step in the literature search resulted in a total of 2659 papers. 2531 studies were excluded on the basis of their title. The abstracts of the remaining 136 studies were assessed, and a further 93 papers excluded. Three more papers were excluded because they were not available online. An assessment of the full text formats of the remaining 40 papers resulted in a further 16 exclusions. A total of 24 studies were

finally included in the review (Appendix I). This sub-section will first present the characteristics of selected studies, their objectives and methodological approaches. In line with the policy analysis framework employed in the review, this will then be followed by findings on the content, context, process and actors of priority setting processes. Lastly, findings on how priority setting processes were evaluated in the studies are presented.

Characteristics of Selected Studies

Of the 24 papers, 20 were focused on developed country experiences, while only 5 included developing country contexts. One of the papers reported a multi-country study that compared priority setting practices in two developed country hospitals (Canada and Norway) and one developing country hospital (Uganda). Ten studies were conducted in Canada, 3 each in Australia and the United States of America, 2 in Denmark and Uganda, and 1 each in Argentina, Chile, Norway, Israel, France, and South Africa.

Of the selected papers, 15 included tertiary level hospitals, 13 of which were also teaching hospitals while 1 study was conducted in a community hospital. The level and type of hospital in the remaining 8 studies was not clear. 14 studies were conducted in public hospitals, 2 in faith based hospitals and 1 in a network of private hospitals. 7 studies were not clear about the ownership of the hospitals where the study was conducted.

Objectives and Methodological Approaches of Selected Papers

Of the 24 papers, only 2 sought to introduce a priority setting method, while 22 sought to describe and/or evaluate the existing priority setting process. Of the latter, 13 sought to describe and evaluate the priority setting process, 7 sought only to describe the priority setting process, and 2 sought only to evaluate the priority setting process. The allocation of hospital resources and budgets to departments and service areas within the hospital was examined in 11 of the selected studies, while the remaining 13 specifically examined health technology assessment in hospitals. Of these, 3 looked at the medicines formulary management process, 2 looked at acquisition of surgical technology while the remaining 8 looked at the technology acquisition process in general.

Most papers (n=18) employed case study methodology, while 6 employed quantitative survey methodology. Two of the 18 case studies were interventional, while the rest were descriptive-explanatory, and all were qualitative, with the exception of one mixed method case study.

Content of Priority Setting

Criteria Used in Priority Setting

Formal and informal criteria were used to set priorities. Formal criteria are objective criteria that, at least on paper, hospitals claim to use in priority setting. These could be classified as health criteria, economic criteria, and administrative criteria, as explained below. Informal criteria refer to subjective considerations that influence priority setting practices in hospitals.

Formal Criteria

In allocating budgets to departments and health services, the main health criteria used were the perceived medical need in the hospital's catchment area. For example, a study in a referral hospital in Uganda showed that disease prevalence in the hospital's catchment area was considered in making decisions about what services to offer (Donaldson & Mooney 1991). Burden of disease was also an important criteria in priority setting in hospitals in Canada (Mitton & Donaldson 2003), Norway (Drummond et al. 2005), Chile (Drummond et al. 2005; Fox-Rushby & Cairns 2005) and Argentina (Drummond et al. 2005). The rule of rescue also featured prominently whereby emergencies received high priority (Baltussen et al. 2005). For health technology assessments and medicines selection, medical criteria included effectiveness, safety, ease of use and capacity of staff to employ the technology, patient benefits in terms of health outcomes and the nature of the technology/medicines. The latter was described in terms of whether it was a proven, new or investigational therapy. Proven therapies were often preferred.

Administrative criteria included strategic alignment and alignment with regional/national priorities, policies and objectives. Examples were found in both developed (such us Canada, Norway, and Australia) and developing country (such as Uganda and Argentina) hospitals (Walker et al. 2007). Priority setting in hospitals in developed countries was also guided by organizational strategies, goals and vision (Baltussen et al. 2005). For example, a study of priority setting in three teaching hospitals in Canada showed that decisions were made based on local strategic fit, and academic commitment and research focus (Shillcutt et al. 2009). Hospitals also seemed to favor innovation in health technologies providing perceived competitive advantage over other hospitals.

Economic criteria included historical budgeting, revenue generating potential, budget impact and costs to patients. Cost-effectiveness was a criterion considered in only 2 studies. Consideration was however given to whether the new interventions were affordable (World Bank 1993).

Informal Criteria

Informally, personal relationships and mutual benefit, lobbying, level of ambition and bargaining ability of departmental heads, and political interests among actors often dominated priority setting decisions especially in developing countries (World Health Organization 2003). For example, in a hospital in Argentina, it was reported that allocations depended on whether the hospital managers and departmental heads enjoyed good relations and the potential for mutual benefit between them (Jamison et al. 2006). Also, given that decision making was centralized, priorities were aligned to meet the political goals of local politicians rather than the health needs of the population (Drummond et al. 2007). In Uganda, even though the formal criteria of need determined that the pediatric department, which received almost 40% of the hospital emergencies, is given higher priority, the surgical department was given greater priority because of its perceived prestige, and because it had managers who were better at "lobbying, making noise and quickly use up their resources" (Drummond et al. 2005; Hoffmann & Graf von der Schulenburg 2000).

Context of Priority Setting

Decision Space

Decision space refers to the range of effective choices or discretion that local authorities or institutions are allowed by central authorities (Hauck et al. 2004). This space can be formal (as defined by policies and regulations) and informal (choices exercised in practice but not formally defined) (Hauck et al. 2004). The decision space for hospital level priority setting was influenced by the structure of the health system and the nature of the priority setting activity. For example, in countries such as Canada and Norway where the health system was significantly decentralized, hospitals had greater decision making latitude (Briggs 1999), while in Chile, a country with a less decentralized health system, priority setting at the hospital level was predominantly guided by national decisions with little discretion at the hospital level (Hadorn 1991). Hospitals generally had most discretion over decisions about medicines formularies and adopting new technologies compared to decisions about choice of programmes and allocations across programmes and departments.

Resource Gap

The reality of constrained resources compelled decision makers to tackle the issue of health care rationing (Hadorn 1991). In Australia for example, shrinking healthcare resources resulted in vigorous debate about the need for, ethics of, and possible methods for cost containment and rationing of health services (Hadorn 1991). Increasing demand and reduced revenues also influenced the financing arrangements in hospitals. In Uganda, for example, an increasing budget deficit led to the capping of budgets and introduction of line budgeting which reduced the flexibility of priority setting (Hadorn 1991). Budget

caps for new medicines were also implemented in an Australian hospital to contain costs in the face of reducing resources (Hadorn 1991).

Financing Arrangements

Hospital financing arrangements also played a key role in determining priority setting practices in hospitals. This influence appeared to be in two forms 1) through the conditions associated with the financing sources and 2) through the incentives engendered by financing arrangements. For example, given that Chile has a mixed publicly and privately financed health care system, hospitals were required to employ guidelines that aligned their priorities to those prescribed by both systems (Nord et al. 2009). Funding arrangements also generated incentives that influenced priority setting practice. Hospitals which were funded by a global budget were less willing to fund incremental use of new technology compared to hospitals funded under different models, such as fee for service (McKie & Richardson 2003). Operating under line budgets reduced the flexibility of hospitals in choosing priorities and allocating resources across them (Hadorn 1991). The introduction of budget caps also discouraged the adoption of new technologies since it required cutting allocations to hospital services (Griffin et al. 2008).

Organizational Culture

Two important aspects of culture seemed crucial enablers of systematic priority setting processes, namely the importance attached to the use of evidence and the openness to consultative and deliberative processes (Mooney 1998). For example in Chile, a country with a history of dictatorship and military rule, a government culture that discourages disagreement impeded the implementation of an appeals and revisions process (Mooney 1998; Robberstad 2005; Anand & Hanson 1997; Kapiriri et al. 2004; Birch & Gafni 1994; Birch & Gafni 2007). Specifically for technology adoption, cultural drivers for technology assessment and acquisition included a proactive approach to seeking new technology, having an organizational commitment to innovation, and placing high importance on integration of technology planning with the mission and strategic plan of the organization (Birch & Gafni 1992; Cleary & McIntyre 2009).

Leadership

Within hospitals, leadership emerged as one of the key factors influencing the process of priority setting. A study on the role of leadership in priority setting reported that leaders are expected to foster goals and a vision for the hospital; create alignment between goals, vision, resources and skills, actors and processes; develop and maintain relationships among actors; embody and promote desired values; and establish an effective process for priority setting (Reeleder et al. 2006).The commitment of hospital leaders to

implementing a fair and legitimate process was considered crucial to meeting the conditions of the ethical priority setting framework, Accountability for reasonableness (AFR) (Donaldson & Mitton 2004; Donaldson & Farrar 1993). Within this framework the role of leadership seems to hinge on two points. First, the enforcement condition of AFR suggests that good leadership involves attention to the ethical aspects of priority setting. Second, leadership approaches describe a variety of values and behaviours which align with, and can be viewed as enablers, for AFR.

Process of Priority Setting

The process of priority setting in hospitals was dependent on the priority setting activity (Figure 3.2). For hospital budget allocations to departments and service areas, at least on paper, the priority setting process began with frontline staff (clinical and non-clinical staff within all the departments of the hospital) submitting their wish lists to their departmental heads (Donaldson & Farrar 1993). In practice, the departmental heads compiled departmental wish lists and submitted them to the hospital management without consulting frontline staff (Mitton & Donaldson 2001). Departmental priorities were compiled to form hospital priorities by a hospital management committee whose membership comprised of all or some of the departmental heads and the executive hospital management. These hospital priorities/budget allocations were thereafter submitted to a hospital management board, whose membership included external stakeholders such as the community, for approval (Mitton & Donaldson 2001). Thereafter, plans were submitted to the regional or national health authorities/ministries for final approval.

Decision making for new technologies and medicines often began with clinician interest and initiative (Tsourapas & Frew 2011). Suggestions for new technologies and medicines were thereafter processed through three possible channels (Figure 3.2). For medicines, often these suggestions were presented to an assessment committee which employed selection criteria to make decisions about their selection and inclusion in the hospital formulary (Mitton & Donaldson 2001). This committee goes under different names such as the medicines and therapeutics committee, or pharmacy and therapeutics committee. For other technology such as surgical technology, decision making depended on the level of capital investment required (Ruta et al. 2005). For technology that required a low capital investment, decision making for adoption was made by departmental heads. When a proposed technology was associated with significant capital investment, final adoption decisions were made by the hospital manager/chief executive officer (Ruta et al. 2005). In some hospitals, technology assessment committees had the responsibility of evaluating and making decisions about the adoption of new technologies (Ruta et al. 2005).

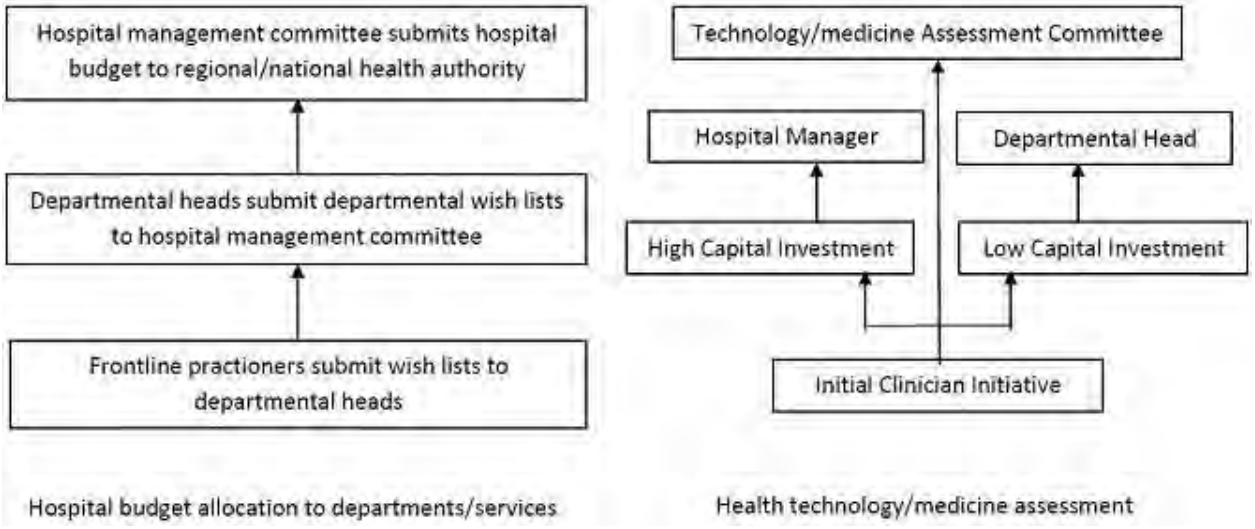


Figure 3. 2: Hospital Priority Setting Processes

Availability and Use of Information

The availability and quality of information for decision making had a significant influence on priority setting practice. Lack of information was the most frequent priority setting obstacle identified by the studies in the review. Hospital decision makers generally lacked sufficient and reliable information for decision making (Donaldson & Mooney 1991). The absence of quality data provided loopholes for the use of informal/subjective considerations in the priority setting process (Tsourapas & Frew 2011). Lack of information also resulted in assessments being conducted after technologies had been adopted and widely used (Hauck et al. 2004). Decision makers felt that the availability of quality information would improve the priority setting process (Hauck et al. 2004).

Actors, their Power and Interests

Whereas the different actors and their influence permeate through all the other themes, we discuss here some specific observations. Actors (stakeholders) in the priority setting process included national and regional health policy makers and planners, local politicians, donor organizations, community members, patients, hospital administrators/executives, hospital department heads and frontline practitioners (non-managerial clinical and non-clinical staff working directly with clients). The involvement of national and regional health policy makers was dependent on where the policy making authority was vested. In high income countries like Canada, where regional health authorities made policy, hospitals aligned their priorities with those of the regional health authorities (Hauck et al. 2004). In low and middle income countries like Uganda and Chile, where policy making was done at the national level, the hospital priorities were aligned with national priorities (Hauck et al. 2004). Donor organizations influenced

decision making in Uganda, a developing country setting, where resource scarcity was extreme (Haynes et al. 1996).

Community involvement was in theory effected through representation in hospital management boards. In one study, community and patient involvement was effected through surveys of community and patient views (Baltussen & Niessen 2006). The minimal involvement of the community and patients was attributed to, among others, the perception that the community and patients lack understanding of medical issues and would represent a biased opinion by solely arguing for the merit of the particular interventions for which they were concerned with (Claridge & Fabian 2005). Within the hospital, priority setting was dominated by hospital administrators/managers, with some settings reporting minimal involvement of frontline practitioners (Eccles & Mason 2001; Grimshaw et al. 2004). Reasons for the minimal involvement of practitioners included time constraints, and lack of interest (Kapiriri and Martin, 2006). Power struggles between practitioners and managers who were reluctant to share decision making power, and frustration by practitioners when their concerns were not addressed, also contributed to the non-participation of practitioners (Eccles & Mason 2001; Grimshaw et al. 2004).

Other than the range of stakeholders involved, the power differences between these stakeholders had a major influence in the priority setting process in hospitals (Ham & Glenn 2003). Power differences exist when some actors in the priority setting process have the capacity to influence priority setting outcomes more than others. This occurs because hospital decision making environments tend to be hierarchical and politically complex (Klein 1993). Power was derived from several sources. For example, actors with control over the budget had more power and hence influence over priority setting decisions (Sibbald 2008). The senior hospital managers exercised more power over decisions compared to other hospital managers and frontline practitioners by virtue of their position as senior managers (Goddard et al. 2006). For example, the hospital executive in a hospital in Argentina indicated that they did not need to consult the hospital management committee when requesting additional staff allocations (Scott 2000). A study of a hospital in Uganda reported power struggles between management and frontline workers, with managers reluctant to share decision making responsibility. Actor power was also derived from possession of specialized skills and certain personal characteristics (Scott 2000). For example, a study of decision making for a new surgical technology in Canada reported conflict between surgeons and radiologists over leadership of the process. There was also conflict between professional groups in hospitals (Jones 1999) leading to competitive and defensive rather than collaborative behavior. A study in Canada reported that actors with greater persuasive skills had greater power to influence the planning process (Jones 1999).

Different actors often had varying values and hence depending on the power they possessed, influenced priority setting in line with their values. For example, two decision making systems were in conflict in hospitals namely the "medical-individualistic" decision system and the "fiscal-managerial" decision system (Simon 1972). While clinicians, who subscribe to the medical-individualistic decision system, were concerned with individual patient outcomes, administrators/managers, who subscribe to the fiscal-managerial decision system, were concerned with the implications of decisions on the budget (Mintzberg et al. 1976). This conflict was more evident in scenarios where decisions affected identifiable patients such as medicines selection processes (Etzioni 1967).

3. 2.3 Towards a Framework for Examining Priority Setting

This review set out to synthesize empirical studies of meso level priority setting in hospitals. This review confirms that there is limited research attention given to priority setting at this level. Since hospitals consume a significant proportion of health system resources, and act as avenues for delivery of key health care interventions, understanding how and where they put their resources is an important research and practice question. Another key observation is that most studies of priority setting in hospitals focused on developed country settings with few being conducted in developing countries. Most of the studies were conducted in tertiary, often teaching hospitals. Such hospitals are relatively large and act as referral hospitals. These hospitals are often semi-autonomous institutions whose management structures, operations, resources and target users are very different from lower level hospitals. There is therefore a gap in understanding how smaller, non-referral hospitals set their priorities and allocate their resources.

Most of studies were inspired by a framework proposed by Martin and Singer (2003) which recommends a strategy for improving priority setting that involves: 1) describing priority setting in the context where it occurs; 2) evaluating the description using an ethical framework; and 3) improving priority setting based on the evaluation. In elaborating this approach, they argue that any sustainable strategy to improve priority setting must be built on a continuous learning platform that, at the very least, captures how priority setting decisions are actually made (Buchanan & Tollison 1972). This, they argue would necessitate a description of the priority setting contexts, processes and actors involved. This review highlights a range of factors influencing priority setting in these institutions regarding context (e.g. financing arrangements, leadership, organizational culture, level of resourcing and demand for healthcare), process (e.g. procedures and tools used) and content (e.g. guidelines and criteria of priority setting) as well as the importance of the interests and influence of the key actors involved in the process. However, some critical aspects of priority setting appear to have been neglected by the studies reviewed. For example, while contextual issues such as financing arrangements and decision making capacity of

managers are arguably important in priority setting processes, these were at best minimally explored. Also given that priority setting is a social process with a range of actors, the power relationships between these actors and how these influence the process warrant a more in-depth examination. There seems to be a gap in research therefore in 1) studies that examine priority setting processes in hospital in developing country settings and 2) studies that seek to critically unpack the influence of the four interrelated components of content, context, process and actor dynamics. Drawing from this review, I have developed a conceptual framework for examining priority setting practices in hospitals, which is presented in the methods chapter of this thesis (5.2.1).

The next section will present a review of literature on evaluation of priority setting practices.

3. 3 REVIEW 2: EVALUATING PRIORITY SETTING PRACTICE: A REVIEW OF LITERATURE

3. 3.1 Review Methodology

Literature Search

I searched for two sets of literature. The first set aimed to obtain empirical and theoretical papers that focused specifically on evaluation of priority setting in healthcare while the second set aimed to obtain theoretical literature on concepts related to evaluation of priority setting in healthcare. This second literature was necessitated by the observation that literature on evaluation of priority setting practices was scarce.

For the first set of literature, I searched in PubMed, EBSCOHOST, Econlit databases, and Google scholar using the following key words: ‘evaluation’ or ‘evaluate’ or ‘success’ or ‘successful’ and ‘priority setting’ or ‘rationing’ or ‘health care rationing’ or ‘planning’ or ‘decision making’ or ‘strategic planning’ or ‘resource allocation’ or ‘health technology assessment’ or ‘budgeting’. Reference lists of selected papers were also manually searched for relevant papers. The titles and abstracts of papers meeting these search terms were reviewed and the full versions of potential papers were read to decide on final inclusion. I excluded non-English language papers.

For the second set of literature I searched for theoretical literature on related concepts such as ethics, justice, deliberative democracy and procedural justice in healthcare. These concepts were identified from reading the papers identified in the first step. The following key words were used in the second step: ‘ethics’ or ‘ethical’ or ‘accountability for reasonableness’ or ‘justice’ or ‘just’ or “procedural justice” or

'deliberative democracy' and 'priority setting' or 'rationing' or 'health care rationing' or 'planning' or 'decision making' or 'strategic planning' or 'resource allocation' or 'health technology assessment' or 'budgeting'.

The selection of papers to include in the review was purposive rather than exhaustive because my aim was conceptual interpretation rather than prediction. It was therefore not necessary to locate every available paper given that the interpretations of our conceptual synthesis would not change if for example ten rather than five papers containing the same concept were included, but rather would depend on the range of concepts found in the papers, their context, and whether they are in agreement or not. The number of papers reviewed was therefore dependent on *'conceptual saturation '*(Thomas & Harden 2008).

Synthesis of Obtained Literature

I read through the selected papers to familiarize myself with the studies and identify key ideas and themes on and/or related to the evaluation of priority setting in healthcare. These themes formed a framework that guided the in-depth reading, critical analysis, organization and synthesis of information obtained from the selected papers.

3. 3.2 Results

In this sub-section, I will present both the characteristics of the selected papers and findings of the review. Given that the search for the first set of literature was more "systematic" and focused on evaluation of priority setting, characteristics will be presented only for these. The second set of literature was broader and will be referenced and integrated with the first set of literature in the results and discussion sections of this review.

The first step in the literature search resulted in a total of 1451 papers. In total, 1358 papers were excluded on the basis of their title. The abstracts of the remaining 93 papers were assessed, and a further 49 papers excluded. Two more papers were excluded because they were not available online. An assessment of the full-text formats of the remaining 42 papers resulted in a further 11 exclusions. A total of 31 papers were finally included in the review (Appendix II). This section will first present the characteristics of selected studies, and their objectives. In line with the objective to review priority setting evaluative frameworks, this will then be followed by findings on the evaluation framework used or discussed in selected papers, with specific focus on the process and outcome indicators as well as the role of stakeholder values.

Characteristics of Selected Studies

Of the 31 papers selected, 4 were conceptual papers, while the remaining 27 were based on empirical research. Of the 27 empirical papers, 8 were from developing country contexts while the remaining 19 were from developed countries. One of the papers reported evaluation of priority setting practices in two developed countries (Canada and Norway) and one developing country (Uganda) while another study included respondents from a number of non-specified developing countries. Sixteen studies were conducted in Canada, 3 in Tanzania, 2 in Uganda and 1 each in Australia, Chile, Israel, United Kingdom and Argentina. Of the selected empirical papers, 18 focused on priority setting in hospitals, 6 on regional/district health systems, while 5 on national health systems.

Of the 18 papers that focused on hospitals, 12 evaluated the allocation of resources between hospital departments and service areas, 2 evaluated the allocation of resources among specified patient groups and 4 evaluated health technology acquisition decisions (Appendix II). Of the 6 studies that focused on regional/district health systems, 5 evaluated allocation of resources within the region/district while 1 evaluated health technology assessment in a region/district. Of the 5 papers that focused on national health systems, 4 focused on allocation of resources at all levels of the healthcare system while 1 focused on health technology assessment.

Evaluating Priority Setting

There is no universally agreed upon framework for evaluating priority setting in healthcare and literature on this is scarce. Available literature mirrors the landscape of priority setting frameworks where two main schools of thought dominate: consequentialism and proceduralism (2.3). There is however increasing recognition of the need to adopt frameworks that draw from both these schools of thought (Norheim et al. 2007; Coulter & Ham 2000). Of the 31 papers selected for this review, 24 proposed the use of frameworks based on procedural conditions only, 1 proposed the use of a framework focused on outcomes only while 6 proposed the use of frameworks based on a combination of the two (Appendix III). Based on the theoretical and empirical literature selected for this review a number of issues appear pertinent to priority setting process namely 1) the substantive principles used in priority setting processes 2) the procedures of priority setting practices 3) the outcomes of priority setting practices and 4) the values that guide priority setting practices. These will be discussed in turn.

Substantive Principles of Priority Setting

Consequential approaches to priority setting prescribe the use of a set of rational rules or principles to set priorities and allocate resources in health care (2.3). Since priority setting is a complex value laden

process, consensus on principles has been problematic (Beauchamp & Childress 1994). Despite this, it is widely recognized that the two principles of allocative efficiency and equity are relevant in the distribution of scarce healthcare resources (Norheim et al. 2007; Hauck et al. 2004). CEA is one of the tools that has been used to allocate resources in both developing and developed countries with the aim of achieving allocative efficiency (2.2.1). Of the papers selected for this review, two were based on approaches to achieve efficiency in resource allocation (Mitton & Donaldson 2003; Gibson et al. 2004).

It is generally recognized, however, that the employment of allocative efficiency as the sole principle for priority setting could result in undesired outcomes. These have been discussed in section 2.2.1. There is significant consensus therefore that while maximizing outcomes is an important concern in allocating resources, it is also important that scarce resources are distributed equitably (Norheim et al. 2007; Hauck et al. 2004). Priority setting decision making should therefore entail trade-offs between the two principles of efficiency and equity. There is no consensus in literature however on the concept of equity in allocation of healthcare resources. There is, however, general agreement that individuals or groups of individuals (patient groups) should contribute to health care funding according to their ability to pay and should benefit from health services according to their need for care (Wagstaff & Van Doorslaer 1993). Norheim and colleagues (2007) have also proposed that resource allocation practices in healthcare should have a special concern for the worst off and should not be based on simple aggregation rules.

Procedural Measures of Priority Setting

Based on the papers selected for this review, procedural conditions that have received significant attention both in theory and practice include wider stakeholder engagement, empowerment of stakeholders, provisions for revisions of decisions, transparency of procedures, the use of relevant criteria and use of good quality evidence/information. Other aspects of procedures that have been considered important include consistency in decision making and enforcement of decisions.

Procedural approaches to priority setting have drawn significantly from principles of *deliberative democracy* and are aimed at achieving procedural fairness. Deliberative democracy is a type of democracy where deliberation is central to decision making. This differs from *aggregative democracy* where voting is key. Deliberative democracy has been defined by John Elster as:

> *"Collective decision-making with the participation of all who will be affected by the decision or their representatives: this is the democratic part. Also, all [proponents of deliberative democracy] agree that it includes decision making by means of arguments offered by and to participants who are committed to the values of rationality and impartiality: this is the deliberative part*"
>
> (Elster 1998)

A look at both theoretical and empirical literature on priority setting processes reveals an emphasis on deliberation and public argument in decision making. A framework for the evaluation of priority setting procedures would therefore, invariably, evaluate, among others, the extent to which the process espouses principles of deliberative democracy. Attempts at evaluating deliberative processes can be traced to Jürgen Habermas's concepts of *ideal speech situation* and *communicative competence* (Habermas 1984). Habermas argues for free and un-coerced discussions among all stakeholders in collaborative decision-making processes. Habermas specifies four conditions to be met for the ideal speech situation to be achieved namely:

1. Each subject who is capable of speech and action is allowed to participate in discourse
2. Each subject is allowed to question any proposal
3. Each subject is allowed to introduce any proposal into the discourse
4. Each is allowed to express their attitudes, wishes and needs.

These conditions essentially emphasize the need for meaningful stakeholder engagement; stakeholders are not present as mere spectators in the process, but rather are empowered to participate and contribute in key decision making stages.

Building on Habermas's concepts of ideal speech and communication competence (Habermas 1984), Renn and Webler developed an evaluative framework for deliberative processes that is based on a normative theory of public participation (Renn 1992; Webler 1995). In their evaluative framework, Renn and Webler propose that deliberative processes should be judged on two meta-principles namely *fairness* and *competence* (Webler 1995). The *fairness* principle is met if opportunities to act meaningfully in all aspects of deliberation are distributed equally among stakeholders. These aspects include setting agenda, developing procedural rules and selecting the information that will be used in the process. The *competence* principle is met if the stakeholders have appropriate knowledge and understanding of the issue. The importance of access and use of quality information and evidence is therefore important. The

Renn and Webler framework has been widely used and adapted in a number of settings (Petts 2001; Rowe & Frewer 2000; Pratchett 1999; Beierle & Cayford 2002; Crosby 1995; Mciver 1998).

More recently, the Renn and Webler framework together with later work by Beierle (1999), was adopted by Abelson and colleagues (2003) to develop an evaluative framework for deliberative processes, that is comprised of three key procedural components namely: (1) representation; (2) the structure of the process or procedures (legitimate, reasonable, responsive and fair), and; (3) the information used in the process.

The *representation* component emphasizes the extent to which different types of representation can be achieved (e.g. geographic, demographic or political). This component also emphasizes access to decision making processes by providing equal opportunities to those affected and the legitimacy of the process of selecting participants. The *structure of process* component focuses on the legitimacy, reasonableness, responsiveness and fairness of the decision making process (Pratchett 1999; Crosby 1995). The *information* component emphasizes the selection, source, use and quality of information used in the decision making process.

Related to these ideas, Gutmann and Thompson (2004) have proposed three principles as key in deliberative democratic process namely publicity, accountability and reciprocity. Publicity is said to be achieved when the reasons behind decisions are available and accessible publicly. Accountability is achieved when decision makers are held responsible for decisions in a way that discourage fraud and bias, while reciprocity is achieved when procedures are structured in a manner that ensures that everyone maintains respect for and listens to each other's ideas and views during decision making discussion. To allow this to happen, they argue, it is crucial to create an environment that allows for and fosters participation (Gutmann & Thompson 2004).

Drawing from deliberative democratic principles, a framework that has gained prominence in evaluating the priority setting process is the ethical framework *Accountability for reasonableness (AFR)* (Martin & Singer 2003; Maluka et al. 2011; Maluka 2011). AFR was the framework of choice for 21 of the 31 papers selected by this review (Appendix III). This framework was developed in recognition of both the difficulty to achieve consensus on distributive principles for healthcare and the need for legitimacy of allocation decisions (Daniels 2008; Daniels & Monkman 2000; Daniels & Sabin 2002). In order to reduce controversy and disagreements, accountability for reasonableness relies on ''fair deliberative procedures that yield a range of acceptable answers'' (Daniels & Sabin 2002). Accountability for reasonableness

proposes that a legitimate and fair priority setting process should meet the following four conditions (Daniels & Sabin 2002); 1) relevance 2) publicity 3) revisions 4) enforcement.

The *relevance* condition requires that priority setting decisions are based on "reasonable" rationales. A rationale will be "reasonable" if it "appeals to evidence, reasons and principles that are accepted as relevant by "fair minded" people who aim to find mutually justifiable terms of cooperation" (Daniels 2008). The relevance of reasons should be vetted by stakeholders in these decisions. Stakeholder participation is therefore important. The *publicity* condition requires that limit setting decisions and their rationales are publicly accessible. Priority setting processes are therefore required to be explicit and transparent for them to be judged as fair and legitimate. The *revisions and appeals* condition requires that priority setting processes provide for a mechanism to challenge decisions and opportunities for revision and improvement of decisions in light of new evidence or arguments. The enforcement condition requires that there be a mechanism to ensure that conditions 1–3 are met.

AFR has however received criticism from some quarters, who have called for either amendments or additions to the procedural conditions of priority setting processes. For example, Gibson et al (2005) has argued that to mitigate the power differences between stakeholders an empowerment condition should be added to AFR (Gibson et al. 2005). Rid (2009), in his critique, argues that the four conditions of AFR need to be better specified and amended to better achieve fairness, inclusiveness and representation in priority setting decision making. Further, he proposes that additional conditions be considered including public involvement, consistency of decision making and impartiality of decision makers (Rid 2009).

Results of Priority Setting

Based on the selected papers, the most commonly proposed results of healthcare priority setting are stakeholder satisfaction with the process, improvement in stakeholder understanding of the process, and that priority setting exercises result in reallocation (shifting) of resources (Gibson et al. 2004; Kapiriri & Martin 2010; Mitton & Donaldson 2003; Sibbald et al. 2009). The first two underline the recognition of the importance of stakeholders to not only accept or approve the adopted priority setting process but also understand it. The requirement for the shifting of resources in essence means that priority setting procedures should be responsive to the dynamic environment of changing healthcare needs rather than perpetrate historic considerations. It has also been proposed that priority setting procedures should reflect public values and/or gain public acceptance (Kapiriri & Martin 2010; Gibson et al. 2004). Other priority setting outcomes that have been used to assess healthcare priority setting practices include the extent to which they further the achievement of the goals of the healthcare organization (Peacock et al. 2006), the

extent to which decisions are implemented (Peacock et al. 2006), the extent to which decisions are based on evidence (Kapiriri & Martin 2010) and improvements in decision making quality and health outcomes (Gibson et al. 2004; Kapiriri & Martin 2010; Mitton & Donaldson 2003; Sibbald et al. 2009).

Public Participation in Priority Setting Processes

It is generally acknowledged that priority setting is made complex by the fact that different actors often have varying values (Coulter & Ham 2000). While the roles and participation of national and institutional level decision makers in priority setting processes are often recognized and are evidenced in literature, the participation of the public/community has not only been shown to be minimal but has also generated significant debate (Mitton et al. 2009). Debating points include when and how public engagement should be sought, or how it should be incorporated into decision making.

Rowe and Frewer (2000) have proposed a framework to assess the degree of public participation in decision making which has three levels: communication, consultation, and participation. In communication, there is one-way transfer of information from the decision-maker to the public such as through newspaper advertisements or announcements on notice boards; in consultation, information is provided by the public to decision-makers, but without interaction or formal dialogue such as through client surveys or suggestion boxes. In participation, there is dialogue and negotiation between decision makers and the public (Rowe & Frewer 2000). Examples of participation methods include citizen juries and planning cells.

Attempts at incorporating public participation methods in healthcare decision making have experienced a number of challenges. It has been argued that the public is unlikely to be objective especially on issues that directly affect them (Mitton et al. 2009). It has also been argued that the public might not be competent to contribute to technical debates on healthcare decision making (Martin, Hollenberg, et al. 2003). The validity of these arguments however, depends on how public involvement is incorporated into decision making. If, as Mooney argued, the public deliberates and sets "high level" principles and values that govern healthcare decision making, while the technocrats make the actual technical decisions, then these issues do not arise (Mooney 2009). In his *communitarian claims* approach to priority setting, Mooney viewed health institutions as social organizations that exist to, among others, meet society's needs (Mooney 2005; Mooney 1998). The citizen is required to "set the stage" for policy makers to allocate resources by determining the procedural rules that policy makers are expected to play by (Mooney 2009). The relationship between citizens and policy makers is here considered to be a principal-agent relationship at a social level (Mooney 1998). Here citizens, who are assumed to have limited

capacity to make technical healthcare decisions entrust this responsibility to health care decision makers. It is argued, however, that citizens care about the principles used to make these decisions. Priority setting processes, Mooney argues, should therefore be based on the values of the very community that the health system or organization serves (Mooney 2005; Mooney 1998).

A second issue of concern for public participation methods is the level of empowerment in decision making spaces. It has been shown that the empowerment of the public is not automatic and that a number of factors come into play. For example, it was shown in Tanzania that effective participation of the public in priority setting decisions was influenced by gender, wealth, ethnicity and education (Shayo et al. 2012). Members of the public who were male, more educated, wealthier or shared ethnicity with decision makers were more empowered in decision making spaces. This underlines the need to design public participation mechanisms in a manner that breaks down the barriers to participation and empowers participants to contribute to decision making. These challenges notwithstanding, what is clear is that given that the primary objective of a health system is to serve the needs of the public, it is imperative that decision making for healthcare resource allocation incorporates the views and values of the very public it seeks to serve.

3.3.3 Towards a Framework for Evaluating Priority Setting in Healthcare Organizations

It is unlikely that any one framework will incorporate an all-inclusive package of principles, procedural conditions or outcome measures, or that these measures will all be considered relevant in all settings. It is however clear from literature that a good number of measures are considered to be of value in most settings, and that principles, procedures and outcomes, far from being mutually exclusive, can and indeed should be used to complement each other in a comprehensive framework for the evaluation priority setting practice.

A number of recurrent concepts that are considered critical in priority setting processes can be drawn from the general literature on priority setting and evaluative frameworks. First, priority setting is a highly political and value laden process (Klein 1998). The question of whose values should inform priority setting must therefore be answered. I am in favor of the *communitarian claims* argument that priority setting "rules" should be based on values determined by the community and then applied by decision makers to set limits (Mooney 1998; Mooney 2005). Priority setting practices should therefore provide for

a process of obtaining citizen views about the principles of priority setting, which are then used by policy makers as social agents to guide decision making.

While a range of community engagement mechanisms have been discussed and debated in the literature (Mitton et al. 2009; Molyneux et al. 2012; Cleary et al. 2013), there is no consensus on how public views should be obtained (Mitton et al. 2009). It has also been argued that the suitability of public engagement mechanisms is highly context dependent and hence likely to vary across settings. For example, mechanisms that work in developed countries where individualism and equality are espoused are unlikely to work in developing countries where society is characterized by hierarchy and interdependence (Sepehri & Pettigrew 1996). Similarly, settings characterized by sharp divisions based on ethnicity, wealth, gender and power would also require different participation mechanisms compared to settings with less divisions. Whichever mechanism is adopted or developed, effective community engagement depends on, among others, the extent to which community members are empowered to participate in decision making. This empowerment, in turn, is influenced by the extent of power differentials between decision makers and community members. Power differentials result from a number of factors such as the roles of the actors, information asymmetries, knowledge and capacity and control over resources (Gaventa 2006). Often these power differentials result in reduced trust between community members and decision makers, which hinders effective community engagement. Community engagement mechanisms must therefore be designed in such a way that they minimize power differentials, promote trust among community members and decision makers and hence empower the community to effectively participate in decision making. Measures that can be taken include recognizing the sources of power differentials and seeking to reduce them. Examples of such measures are presented in discussions about empowerment of stakeholders later.

This communitarian perspective has been adapted to varying extents in frameworks of priority setting (Lenaghan et al. 1996). Further, frameworks that argue for fair representation of relevant stakeholders often include the community as a key stakeholder who should be included in health policy making processes, including priority setting. While critics of community involvement in decision making point out that community members lack understanding of technical issues and are hence incapable of meaningful contribution (Martin, Hollenberg, et al. 2003), I have argued (10.2.4) that the role of the community is not to directly contribute technical solutions, but rather to provide "meta-rules" or generic principles that guide decision making (Mooney 2005; Mooney 1998; Mooney 2009). For example, lay community members are quite competent in expressing their views about whether age should be considered in decision making, and therefore whether children or old people should be given higher priority. The community is also capable of providing meaningful input in eliciting the relative importance

of principles such as severity of disease, efficiency and procedural conditions of priority setting. The fact that both the community and technocrats have a role to play also provides some checks and balances, where potentially perverse inclinations by one group are checked by the other.

Second, priority setting is necessitated by, and is an attempt to solve, the fundamental economic problem of *scarcity and choice* (Hauck et al. 2004; Mitton & Donaldson 2003). Frameworks for priority setting practice, and indeed their evaluation, must therefore consider how best to achieve health system goals, given scarce resources. This essentially entails making choices such that desired outputs are maximized within the available resources. Economic criteria must therefore be a key consideration of priority setting processes. Also making choices implies tradeoffs; choices come with attendant opportunity costs (the benefit foregone when resources are used for one option and not another) (Drummond et al. 2005). Priority setting should therefore be about maximizing outcomes while minimizing opportunity costs. A priority setting process must therefore demonstrate consideration of the effectiveness and costs of alternatives and the opportunity cost of decisions. An example of such a process is PBMA (2. 2.1).

Third, that the goal of maximizing desired outcomes must be traded-off against equity. Priority setting exercises in health institutions should aim at achieving an appropriate balance between maximizing intended outcomes for a given resource level subject to the constraint of equitably distributing the health gains across competing groups. To achieve equity, the distribution of resources should be determined by needs rather than other factors such as ability to pay, favoritism or political consideration. For example, managers in a hospital should distribute resources across service areas based on the needs of these service areas, rather than based on the potential for the service area to generate income or the level of influence of managers representing these service areas. Further, resource allocation should demonstrate a special concern for the worse off. The worse off can either be patient groups in a worse medical condition right now (e.g. medical emergencies), or, alternatively, the ones whose complete life in terms of health will be worse if not treated now. The worse off should also include vulnerable patient groups. Vulnerability is often context dependent but could include groups such as the disabled, the elderly, children and women. Also, allocation should not be based on simple aggregating rules.

Fourth, given that priority setting entails adjudication over competing wants among groups of interested parties, procedural justice is a desired goal (Martin et al. 2002). While standard welfare economics evaluates decisions by their consequences, evidence suggest that the procedures by which decisions are made also affects the welfare of individuals (Wailoo & Anand 2005; Dolan et al. 2007). It has been

suggested that procedures are important either for their own inherent value or for their instrumental value (i.e. as determinants of outcomes) (Wailoo & Anand 2005).

It is evident from literature that a number of procedural conditions are desired in decision making for healthcare resource allocation. Drawing from this, I propose the following six procedural conditions as key in evaluating priority setting processes:

Condition 1) *Stakeholder involvement*; literature strongly suggests that policy making processes and specifically priority setting processes are deemed to be fair and legitimate partly when the relevant stakeholders are effectively involved in the process. Specifically for priority setting, these relevant ranges of stakeholders include administrators/health managers, front line practitioners, patients and the community.

Condition 2) *Empowerment*; that the engagement of stakeholders should be such that they have the power to contribute to and influence decisions. Given the existence of power differences among actors in healthcare organizations (Gibson et al. 2005), mechanisms should be there to minimize the effect of this power difference. These include for example giving each stakeholder equal opportunities to participate at different stages of the decision making process such as setting agenda, developing procedural rules and selecting the information that will be considered in decision making, clearly defining and enshrining the role of the each stakeholder in priority setting rules and guidelines, ensuring accessibility of relevant information to each stakeholder to reduce information asymmetries and ongoing rather than one off or infrequent engagement of stakeholders since it has been shown that ongoing engagement builds trust over time.

Condition 3) *Transparency*; given that priority setting is a political process that affects a wide range of actors, the accountability and legitimacy of the process is enhanced by transparency. The procedures, decisions and reasons for the decisions should ideally be accessible to all stakeholders and communicated to them as well.

Condition 4) *Revisions*; the priority setting process should be dynamic enough to allow for revisions of decisions in the face of new information. To facilitate this, the process should have a provision for appeals to decisions.

Condition 5) *Use of evidence*; priority setting processes should endeavor to use quality information/evidence to inform decisions.

Condition 6) *Enforcement*; a legitimate priority setting process should provide mechanisms for an assurance that the other five conditions are met.

Finally, the results of priority setting processes are also important. While it is generally desirable to assess outcomes, attributing them to priority setting practices, especially in the short term, is likely to be problematic given that priority setting is a highly complex social process. Measures such as the achievement of health system/organizational goals and improvement of health outcomes cannot be easily attributed to specified priority setting activities except perhaps over the long run. Such measures would pose significant measurement challenges when adopted as measures for priority setting success. There is therefore a need for intermediate outcome measures that can be easily attributed to specified priority setting activities. Based on this, and on the frequency of recommendation from literature, I propose the following outcomes to be considered in the evaluation of priority setting practices:

1. *Stakeholder satisfaction*; the stakeholders should report their satisfaction with the priority setting process adapted;
2. *Stakeholder understanding*; each stakeholder should demonstrate an understanding of the structure, content and processes of priority setting;
3. *Shifted (reallocation of) resources*; priority setting practices should result in real movement of resources and reflect change in priorities rather than historical allocations, and;
4. *Implementation*; priority setting processes should ultimately result in the accountable implementation of decisions.

Drawing from this review, I have developed a conceptual framework for evaluating priority setting practices in hospitals, which is presented in the methods chapter of this thesis (5.2.3).

3:4 CHAPTER SUMMARY

This chapter has presented two literature reviews. The first review identified a range of factors that affect priority setting practice in hospitals. These factors provide potential policy levers that could be used to influence priority setting processes. Arising from the first review, I have proposed a framework that, in my view, could be useful in examining priority setting processes and potentially informing the design of system interventions to influence priority setting at the meso level in hospitals (5.2.1). In the second

review, I have proposed a framework for the evaluation of priority setting practice in health care institutions that specifies both substantive principles and procedural conditional requirements for priority setting practices (5.2.3). This is in keeping with current thinking that the two paradigms of priority setting should be harnessed into a comprehensive framework for priority setting. As concerns principles, I have argued that priority setting is fundamentally an attempt to resolve the economic problem of scarcity and choice. Priority setting practice should therefore incorporate economic considerations to guide decision making. Equity should however also be a key consideration in allocating resources. In selecting intermediate results for priority setting, I have argued for measures that are easy to attribute and hence left out measures such as health outcomes. An overarching thesis of this framework is that priority setting practice should be guided by community values. I have anchored my proposed framework on this communitarian claims school of thought based on my agreement with the notion that health organizations are social institutions that exist to serve the citizens.

CHAPTER IV: HOSPITALS AS ORGANIZATIONS: A BRIEF LOOK AT ORGANIZATIONAL THEORIES

4. 1 INTRODUCTION

In the previous chapter, I presented two reviews of literature on priority setting in healthcare, with a focus on hospitals. It emerged that priority setting is a highly complex process that is heavily embedded in and influenced by organizational factors in the context in which it occurs. Given that this thesis focuses specifically on hospitals as healthcare organizations, understanding organizational theories is important to an examination of priority setting in hospitals. In this chapter, I will present a summary of organizational theories that are relevant to and potentially useful to understanding the functioning of healthcare organizations. The chapter is structured into three parts. The introduction is followed by a section presenting a discussion of organizational theories relevant to healthcare organizations and lastly by a chapter summary.

4. 2 ORGANIZATIONAL THEORIES AND BEHAVIOR

Organizational theories can be grouped into 3 main categories, which represent the evolution of thinking about how organizations function (Walonick 1993; Ivanko 2013). These are classical theories, neo-classical theories and systems theories (Walonick 1993; Ivanko 2013). These shall be discussed in turn.

4. 2.1 Classical Organization Theory

Classical organizational theories were developed in the early twentieth century and include three theories namely the *scientific management theory*, the *bureaucratic theory*, and the *administrative theory* (Walonick 1993; Sarker & Khan 2013). The scientific management theory, often referred to as *Taylorism*, was developed by Fredrick Taylor and focused on improving efficiency and output through scientific studies of worker' processes (Hatch & Cunlife 2013). This theory was popular in the 1880s and 1890s in manufacturing industries. Key components of the scientific management theory include synthesis, analysis, rationality, logic, work ethic, empiricism, elimination of waste, efficiency and standardized best practices (Taylor 1917; Walonick 1993; Hatch & Cunlife 2013). A common thread in all these components is the emphasis on efficiency of the worker rather than any specific behavioral qualities or variations among workers. A significant part of Taylorism was time studies. Taylor was concerned with reducing process time and worked with factory managers on scientific time studies. This theory proposed

four basic principles to improve organizational productivity (Taylor 1917; Walonick 1993; Hatch & Cunlife 2013): 1) determine the best way to perform each task, 2) determine and match the right worker to each task, 3) Closely supervise the workers as they perform their tasks while providing motivation through reward and punishment and 4) planning and control by management. This theory thus focused on getting the best people and equipment, analyzing each component of the production process and determining the right combinations of factors that will improve productivity (Walonick 1993; Ivanko 2013).

The second classical theory is the *bureaucratic theory*, which was championed by Max Weber (1947). Weber aimed to expand on Taylor's theories, and emphasized the need to reduce ambiguity in organizations by putting in place clear lines of control and authority (Weber 1947). The *bureaucratic theory* stressed the need for a formal system of organization with clearly defined hierarchy and roles (Sarker & Khan 2013). This was thought necessary to remove ambiguity and ensure uniformity. Weber observed that organizations adopted the bureaucratic style since it represented the most technically efficient and rational form of organization (Grey 2012; Hatch & Cunlife 2013). He however identified a dichotomy in the forms of rationality that organizations could adapt namely formal and substantive rationality (Grey 2012; Hatch & Cunlife 2013). Formal rationality refers as when the means adopted to achieve an objective are the most efficient for that purpose (Grey 2012). Formal rationality is not concerned with whether an objective is appropriate or not, but rather, with how to achieve the objective (Hatch & Cunlife 2013). Substantive rationality on the other hand is concerned with whether the end result is appropriate (Hatch & Cunlife 2013). It has been observed that while organizations might aspire to be formally bureaucratic, they are often not substantively bureaucratic (Grey 2012). Others, especially public organizations are often neither rational nor substantively bureaucratic and have been referred to as dysfunctional bureaucracies (Grey 2012).

Another classical theory, the *Administrative theory* proposed the development of universal principles of management that could be applied to all organizations (Mooney & Reiley 1931). Administrative theory considers productivity improvements from “top down” as opposed to the scientific theory which viewed productivity improvements as “bottom up”. Early developers of the administrative theory included Henri Fayol (1949), Mooney and Reiley (1939) and Gulick and Urwick (1937). Administrative theory developed general guidelines on how to formalize organizational structures and relationships and viewed the job as antecedent to the worker. These principles were primarily broad guidelines for decision making and included the following (Fayol 1949); 1) scalar principle which recommends and emphasizes the hierarchical structure of control relations, 2) exception principle which recommends that all routine

matters be handled by subordinates leaving superiors free to deal with exceptional issues where existing rules are inapplicable 3) span of control principle which specifies that superiors should have no more subordinates than they can effectively oversee 4) unity-of-command principle which emphasizes that no subordinates should receive orders from more than one superior 5) departmentalization principle which recommends that activities should be grouped to combine related activities in the same administrative unit. Related activities could be based on similarity of purpose, process, clientele, or place 6) line-staff principle which recommends that all activities directly related to organizational goals are line functions. All others are staff functions that advise, service, or support. Staff units are segregated from line functions and are ultimately subordinate to them.

The classical theories have a number of limitations in the way they conceptualize organizations. First, these theories have been criticized for being too rigid and mechanistic (Walonick 1993). It is assumed that organizations always operate in a rational, systematic way as long as the right "ingredients", in the right mix, are present. Second, these theories focused more on production processes and less on the people involved in the processes. Workers were assumed to be motivated solely by economic reward and that as long as this was assured, they would perform in a rational, predictable manner (Walonick 1993). Third, classical approaches were thought to be more appropriate for stable and simple organization than for today's dynamic and complex organizations. These shortcomings led to the emergence of neoclassical theory, which will be presented next.

4. 2.2 Neoclassical Organization Theory

While classical approached focused on tasks and machines, over time there was realization that there was need to pay attention to the human side of organizational dynamics. Neoclassical theories had three main elements namely *the Hawthorne experiment*, *the human relation movement*, and *the organizational behavior* (Walonick 1993; Sarker & Khan 2013; Ivanko 2013). The development of neoclassical organizational theories began with the Hawthorne studies in the 1920s. While manipulating conditions in the work environment at the Western Electric plant in Hawthorne, Illinois, Mayo and Roethlisberger observed that paying attention to employees in a friendly and non-threatening way was sufficient to increase output (Mayo 1933). These findings suggested that workers have social and psychological needs in addition to economic needs impacting on their motivation (Walonick 1993). Arising from the Hawthorne experiments, a number of theorists carried out studies that focused on the social relationships between workers in organizations (Sarker & Khan 2013). A series of studies by Douglas Mc Gregor, Abraham H. Maslow, Keth Davis, Frederick Herzberg, Rensis Likert and others led to what is the human relation movement (Singh 1983). The human relation movement proposed that workers in an organization

responded to the social context and interpersonal dynamics in organizations (Sarker & Khan 2013; Singh 1983). Further studies on group dynamics in organizations developed the field of organizational behavior (Sarker & Khan 2013). This focus on studying the behavior and performance of individuals and groups as well as worker attitudes in organizational settings came to be known as the behavioral science approach (Cole 1984). Neoclassical theories thus emphasize the *affective* and *socio-psychological* aspects of human behavior in organizations (Sapru 2008). These theories created awareness of the important role of human relations in organizations.

4.2.3 Contingency Theory

Until around the 1960s normative interests urged organization theorists to use science to discover the best way to organize for optimal performance. But the science was not working, and ambiguous answers regarding the one best way to design an organization caused some to realize that what works best is contingent upon factors like the environment, goals, technology, and the people involved (Hatch & Cunlife 2013; Walonick 1993). Their approach came to be known as contingency theory. The contingency theory was proposed by the Australian psychologist Fred Edward Felder and proposed that there is no best way to lead, organize or make decisions in an organization. Rather, the optimal course of action is contingent (dependent) upon the internal and external situation (Fedler 1967). These constrains may include the size of the organization, how it adapts to its environment, differences among resources and operations activities, managerial assumptions about employees, strategies and technologies used (Fedler 1967). Contingency theorists criticized the classical and neoclassical theories for failing to appreciate the role of the environment in organizational functioning. Contingency theory proposed that the best way to organize depends on the nature of the environment to which the organization must relate (Walonick 1993). For contingency theorists, effective organizations are those in which multiple subsystems are aligned to maximize performance in a particular situation (Fedler 1967; Hatch & Cunlife 2013).Contingency theorists identify the key contingencies in each situation and try to determine the best fit between them (Fedler 1967; Hatch & Cunlife 2013).

A major weakness of the organizational theories discussed so far was the view of the organization as composed of separate parts with specified functions acting independent of the other. In recent years, there has been the realization that organizations are indeed composed of component parts, but that these parts are interrelated and interact in a non-linear fashion. This thinking, termed systems thinking, is discussed next.

4. 2.4 Systems Theory

Systems theory is an approach to organizations which likens the enterprise to an organism with interdependent parts, each with its own specific function and interrelated responsibilities (Walonick 1993; Hatch & Cunlife 2013). The system may be the whole organization, a division, department or team. Organizations as systems, are considered to be open to, and interact with, their environments, and it is possible to acquire new properties through emergence, resulting in continual evolution (Tsoukas 1998). Rather than reducing an organization to the properties of its parts or elements, systems theory focuses on the arrangement of and relations between the parts which connect them into a whole (Tsoukas 1998; Plowman et al. 2007). Characteristics of organizations as systems include (Walonick 1993; Hatch & Cunlife 2013): 1) the organization is an open system, which interacts with the environment and is continually adapting and improving 2) the organization influences and is influenced by the environment in which it operates 3) if an organization is to be effective it must pay attention to the external environment, and take steps to adjust itself to accommodate the changes in order to remain relevant 4) all part of the organization are interconnected and interdependent; if one part of the system is affected, all parts are.

In describing organizations, Bolman and Deal (2013) have observed that organizations as systems, have four defining characteristics. First, organizations are complex. They contain an array of people, departments, technologies and goals, whose interactions are difficult to predict (Bolman & Deal 2013). Moreover, organizations are open systems that deal with a changing and erratic environment. Second, organizations are unpredictable. It is difficult to predict the future outcome of present actions. They note that often the solutions for yesterday's problems create obstacles for the future (Bolman & Deal 2013). Third, organizations are deceptive. They camouflage mistakes and surprises (Bolman & Deal 2013). Fourth, organizations are ambiguous. Complexity, unpredictability and deception generate rampant ambiguity (Bolman & Deal 2013). Understanding what is really going on in an organization is problematic. Ambiguity has a number of sources. Often available information is incomplete or vague and different people may interpret the same information in a variety of ways depending on mind-sets and organizational doctrines (Bolman & Deal 2013).

Systems thinking has been applied in healthcare to address a range of challenges including tobacco control (Best 2007), obesity (Butland 2007; Finegood et al. 2008; Shiell 2008), and tuberculosis (Atun & Menabde 2009). More recently, the proposal of using systems thinking in the health system has emerged (World Bank 2007), and emphasized by the WHO health systems framework (WHO 2007). Specifically, Complex Adaptive Systems Theory (CAS) has found utility in explaining and understanding complex

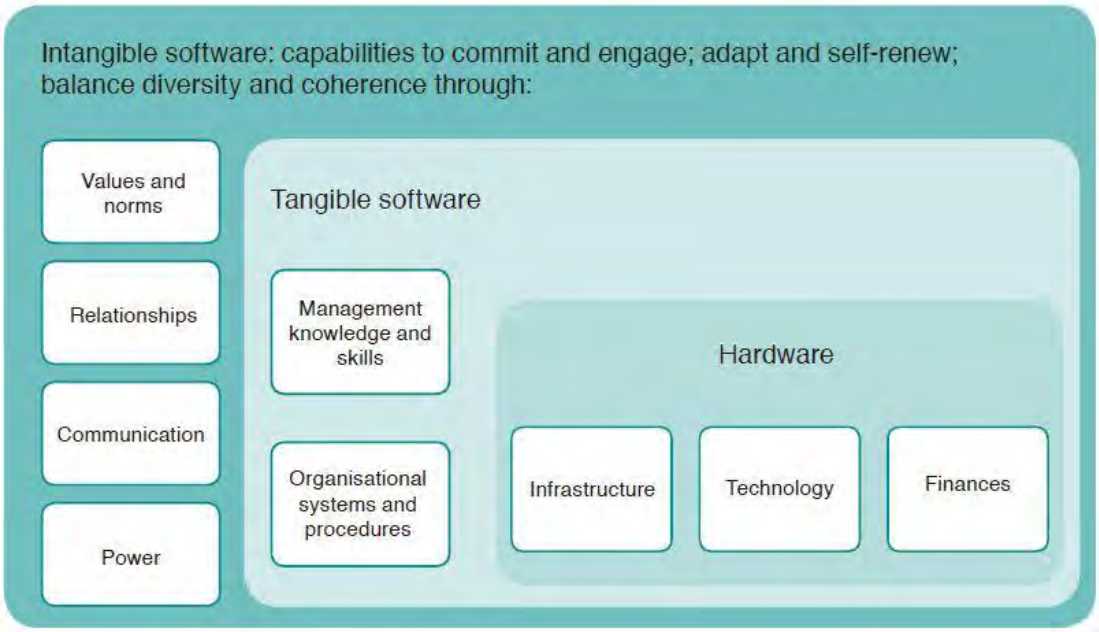
health system phenomena. CAS is an approach that sees healthcare and other systems as dynamic processes where the interactions and relationships of different components simultaneously affect and are influenced by the system, rather than applying simple cause and effect assumptions (Health Foundation 2010; Begun et al. 2003). Central to CAS is the role of actors or, to use the term used in CAS, 'agents' in the system. Plsek and Greenhalgh (2001) have defined CAS as "a collection of individual agents with freedom to act in ways that are not always totally predictable, and whose actions are interconnected so that one agent's action changes the context for other agents". CAS possess a number of defining characteristics, four of which are relevant to organizational theory applications (Eoyang & Berkas 1999; Marion & Bacon 2000; Begun et al. 2003).

First, CAS exist in a dynamic state with multiple interacting agents and the influence of external forces (Schneider & Somers 2006; Rickles et al. 2007; Ellis et al. 2011). The large number of agents in the CAS, the connections among the agents, and the influence of external forces all combine to result in constant and discontinuous change in the CAS. Second, the relationships between these agents and also between components of the system are complicated and enmeshed (Schneider & Somers 2006; Rickles et al. 2007; Ellis et al. 2011). CAS are comprised of a number of interdependent parts and influenced by a number of interdependent forces (Begun et al. 2003). In addition to being numerous and interdependent, parts and variables, and their relationships, can be nonlinear and discontinuous. Small changes in variables can have small impacts at some times, and large impacts under other conditions (Schneider & Somers 2006; Rickles et al. 2007; Ellis et al. 2011). Conversely, the effects of large changes in variables can vary from negligible to large, depending on the state of other variables (Schneider & Somers 2006; Rickles et al. 2007; Ellis et al. 2011). The agents of a CAS both alter other agents, and are altered by other agents, in their interactions. Feedback loops among agents can generate change or stability in the system, depending on the relationships among the agents (Schneider & Somers 2006; Rickles et al. 2007; Ellis et al. 2011). In the case of feedback loops that generate change, two systems that initially are quite similar may develop significant differences over time (Begun et al. 2003). Even the same system, after the passage of time, may bear little resemblance to its previous configuration (Schneider & Somers 2006; Rickles et al. 2007; Ellis et al. 2011). Because the context for each CAS is unique, and each CAS is context-dependent, each CAS is unique (Schneider & Somers 2006; Rickles et al. 2007; Ellis et al. 2011). Third, CAS exhibit *emergent*, or *self-organizing* behavior (Schneider & Somers 2006; Rickles et al. 2007; Ellis et al. 2011). Complexly structured, non-additive behavior emerges out of the interactions between system components (Begun et al. 2003). These interactions result in ordered states such that the behavior of the resulting whole is more than the sum of individual behaviors (Begun et al. 2003). Ordered states arise when a system component adapts its individual behaviors to accommodate the behaviors of components with

which it interacts. For example, interacting people and organizations tend to adjust their behaviors and worldviews to accommodate others with whom they interact. Networks with complex chains of interaction allow large systems to correlate, or self-order (Marion & Bacon 2000). Applied to social systems, actors adjust their interaction based on characteristics of the other parties to the interaction. Extensive communication among large networks of actors can spread norms and create self-ordering structures, such as norms. CAS are hence often sensitive to certain small changes in initial conditions. An apparently trivial difference in the beginning state of the system may result in enormously different outcomes. This phenomenon is sometimes called the "butterfly effect". However, this sensitivity has to do with the exact path that the complex system follows into the future, rather than its general pattern. CASs, tend to maintain generally bounded behavior, sometimes called an "attractor," regardless of small changes in initial conditions. As a result, a fourth property of CAS is that they are robust (Marion & Bacon 2000). They exhibit the ability to alter themselves in response to feedback. Complex systems possess a range of coupling patterns, from tight to loose (Marion & Bacon 2000). These different patterns help organizations survive a variety of environmental conditions. Loosely coupled structures cushion and moderate the systems response to strong shock while more tightly coupled structures tend to "lock-in" to a response (Marion & Bacon 2000). Although adaptive in the moment, such a response may turn maladaptive as the environment shifts (Marion & Bacon 2000). As a whole, the complex structures provide multiple and creative paths for action. If one pattern of interdependency in a network is disrupted, other units can respond due to their interdependence with the disrupted unit (Marion & Bacon 2000). Robust response means that the complex system can effectively adapt to a wide range of environmental change, giving the system "amazing resilience" (Marion & Bacon 2000; Trinh & Begun 1999).

CAS has found a variety of applications in healthcare. For example, Kwamie and colleagues used CAS theory to evaluate a leadership development programme for district managers in Ghana (Kwamie et al. 2014). Gilson and colleagues applied CAS to examine the challenges that face initiatives to strengthen primary healthcare services in South Africa (Gilson et al. 2014). Bishai and colleagues applied CAS to develop a computer simulation model to illustrate the unintended consequences of apparently rational allocations of healthcare resources to curative and preventive services (Bishai et al. 2014). Elloker and colleagues use CAS to examine the complexities of managing a sub-district health system in South Africa (Elloker et al. 2012). In applying CAS, Elloker and colleagues develop a framework of organizational capacity that draws on a framework proposed by Aragon (2010). In this framework, healthcare systems are seen to be composed of *hardware* and *software* components (Figure 4.1) (Elloker et al. 2012).

Hardware components include such factors as infrastructure, technology and resources. System software includes the *tangible software* of management knowledge and skills and organizational systems and



procedures and *intangible software* of values and norms, relationships and power.

Figure 4. 1: Framework for organizational capacity (Elloker et al 2012)

An important aspect of this framework is that it recognizes and highlights the importance of software aspects of the health system. The emphasis on organizational software is important given that often systems analyses give more weight to hardware issues and neglect software issues. For example, The WHO health systems framework conceptualizes health systems as comprising of systems hardware—medical products, finance, human resources, information systems and service delivery (Sheikh et al. 2011). However, Sheikh and colleagues argue that system software, which they define as "*the ideas and interests, values and norms, and affinities and power that guide actions and underpin the relationships among system actors and elements*", is also critical to health system performance Sheikh et al 2011). Elloker et al (2012) have also observed that intangible features of health systems software are crucial in influencing the behaviours of actors in organizations and "underpin its power to perform".

As pointed out previously, a prominent feature of CAS is the role of agents and the dynamics of their interactions. Interactions among actors in a system are often influenced by their interests and power dynamics. As shown in the literature review (3.2) actor and power dynamics significantly influence priority setting practices in healthcare organizations. These are discussed next.

4. 2.5 Actors Dynamics and Micro-practices of Power

Politics has been proposed as a key frame or lens through which organizations can be examined and understood (Bolman & Deal 2013). The political frame views organizations as roiling arenas, hosting ongoing contests of individual and group interests (Bolman & Deal 2013). As arenas, they house competition and offer a setting for the ongoing interplay of divergent interests and agendas. From this perspective, every significant organizational process is inherently political (Bolman & Deal 2013). Boleman and Deal (2013) provide five propositions that summarize the perspective. First, organizations are viewed as coalitions of different individuals and interest groups (Bolman & Deal 2013). Second, coalition members have enduring differences in values, beliefs, information, interests, and perceptions of reality (Bolman & Deal 2013). Third, the most important decisions in organizations involve allocating scarce resources (Bolman & Deal 2013). Fourth, scarce resources and enduring differences put conflict at the center of day-to-day dynamics and make power the most important asset (Bolman & Deal 2013). Fifth, goals and decisions emerge from bargaining and negotiation among competing stakeholders jockeying for their own interests (Bolman & Deal 2013).

Given that the political frame views organizations as coalitions composed of individuals and groups with enduring differences, it puts power at the center of organizational decision making. Power has been described as the ability to influence others (Bolman & Deal 2013). In his seminal on work power, Steven Lukes (1974) describes what he calls the three dimensions of power (Lukes 1974; Swartz 2005). The one dimensional view of power involves a focus on behavior in the making of decisions on issues over which there is an observable conflict of interests, seen as express policy preferences, revealed by political participation (Lukes 1974; Swartz 2005). This dimension is positivist in outlook and focused on empirical identification of actors who participated in decision-making where influence over others could be readily discerned (Lukes 1974; Swartz 2005). Power is seen as the ability of one actor to get another actor to do something they did not want to do. Power in the first dimension is embodied in "concrete decisions" (Lukes 1974; Swartz 2005). The second dimension considers "what does not happen" in decision-making settings; namely, those issues that are unwittingly neglected or consciously excluded from the agenda. Power can be exercised through non-issues and non-decision making as well (Lukes 1974; Swartz 2005). For Lukes, this represented the second dimension of power: control of the agenda (Lukes 1974; Swartz 2005). In the third dimension of power, Lukes argued that power is not exhausted by decision making (first dimension) and agenda construction (second dimension) but could operate at a deeper more invisible level (Lukes 1974; Swartz 2005). Lukes argued that the third dimension of power consists of deeply rooted forms of political socialization where actors unwittingly follow the dictates of power even against their best interests (Lukes 1974; Swartz 2005).

Power has been observed to have a key influence in health policy implementation (Walt 1994; Gibson et al. 2005; Erasmus & Gilson 2008). Actor power is typically derived from their position, political influence and connections, knowledge, technical expertise, resources and physical power (Pantazidou 2012). Different models of analyzing power relations have interpreted the concept differently. For example, top down models see power as the control exercised by those at the higher level of the organizational hierarchy over those in the lower levels in an effort to achieve defined organizational objectives (Erasmus & Gilson 2008). According to these models, policies are developed through political processes and the role of the implementer is restricted to implementation of policy objectives (Erasmus & Gilson 2008).

Bottom-up models of power focus on the micro-practices of power within organizations. Power is seen to be manifested by consensus building to gain influence over others (Erasmus & Gilson 2008). Power is thought to be exercised to further each actors' interest rather than to achieve public policy goals. A feature of bottom –up models is the exercise of discretionary power by implementing actors (Erasmus & Gilson 2008). Given that policy makers cannot foresee every aspect of how the implementation process will unravel, implementing actors exercise discretion to manage the day to day challenges of implementation (Erasmus & Gilson 2008). Sharp et al. (2000) look at power as not only the ways in which some actors exercise control over others but also the ways in which some actors resist such control. For example, Lipsky's street level bureaucrat model argues that policy implementation, and therefore outcomes, are significantly influenced by actors at the frontline of implementation who exercise discretionary power (Lipsky 1980). These 'street level bureaucrats' shape the policy in line with their understanding of it and aligned to their working routines, values and interests (Buse 2007). A related model of power looks at policy as "meaning making", where power is seen to also reside in the interpretation of policies by the implementers given that it shapes how policy ideas are understood by others (Erasmus & Gilson 2008). The understanding of policy is hence not only influenced by senior policy makers but also by implementers, as well as by clients and the wider community (Erasmus & Gilson 2008).

A framework that is perhaps useful in analyzing the power dynamics and interactions among actors in organizations is Norman Long's (1999) *Actor interface analysis* (Lehmann & Gilson 2013; Long 1999; Long & Jinlong 2009). Social interfaces occur at points where "different, and often conflicting, life-worlds or social fields intersect" (Long 1999). Interface analysis aims to explicate the types and sources of social discontinuity and to explore the cultural and organizational means of transforming or reproducing them (Long 1999). Interface analysis is particularly useful given that it provides a means

through which the platforms of interactions between actors and the power dynamics can be critically examined.

This framework is particularly suitable for analyzing actor interactions within the framework of CAS given that it recognizes the key role of "human agency", self-organizing processes and the influence of both internal and external organizational factors and relationships (Long & Jinlong 2009). Norman Long (1999) has suggested the following features for social interfaces:

- Interactions between actors at the interface leads to the development of boundaries and shared expectations so that over time the interface itself becomes "an organized entity of interlocking relationships and intentions"

- Interface interactions often generate conflict given that actors at the interface have differing interest levels of power

- Social interfaces often provide platforms for the generation of differences in values, worldviews or cultural paradigms among actors

- Actor interpretations and meaning making are influenced by interactions at the interface. Meaning making and interpretations of policies or organizational processes therefore emerge from the interactions, dialogue, and contests of meaning at the actor interfaces

- Practices of power emerge as the result of complex negotiations and struggles over status, authority, resources and reputation at the interface

- Interfaces are composed of multiple discourses**;** these discourses are often platforms for the multiple values, interests, cultures and power differences among actors to play out. Outcomes of such interactions include the endorsement, transformation or rejection of the prevailing discourse

- Interactions at the interface shape and influence policy implementation and organizational processes. These processes are hence seen as negotiated process rather than the simple execution of a pre-specified plan with expected outcomes. It is therefore important to focus on how policy or organizational processes are shaped by interactions among actors, rather than simply on implementation models (Long 1999; Lehmann & Gilson 2013).

Lehmann and Gilson's (2013) policy analysis of a community health worker programme in South Africa offers an example of the application of actor interface analysis in examining power dynamics among actors in the health system. The study identified 4 distinct interfaces in the community health worker programme namely (1) between competing directorates (2) between programme managers in the sub-district office, (3) between community health workers and facility managers, and (4) between new and old cadres of community health workers (Lehmann & Gilson 2013). At each of these interfaces, it was reported that there was contestation over resources and negotiation to align the community health worker policy with the local context (Lehmann & Gilson 2013). Further, it was observed that the contestation played out overtly and actively in some cases, and was hidden and passive in others.

Another framework that has been used to analyze power in social contexts and is relevant to health policy analysis is Gaventa's *power cube* that visualizes power as comprised of three dimensions namely 1) the forms of power 2) the spaces of power and 3) the levels of power (Figure 4.2) (Gaventa 2006).

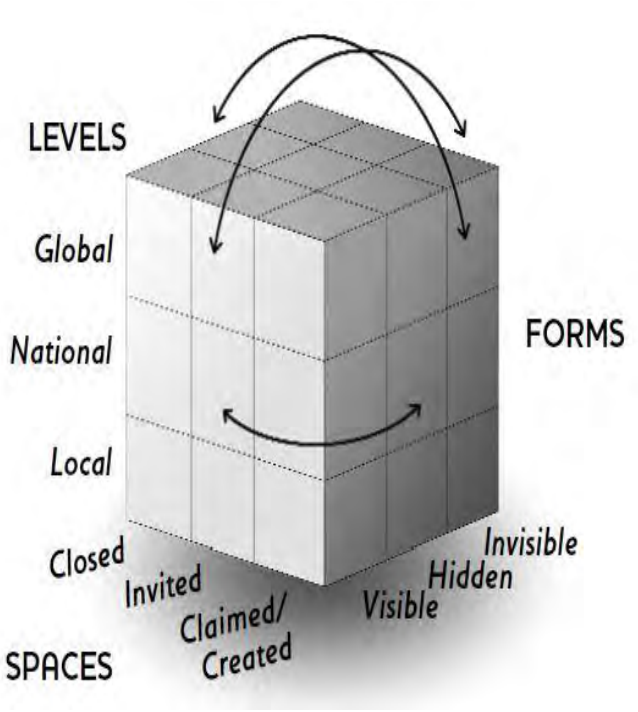


Figure 4. 2: The power cube – levels, spaces and forms of power (Gaventa, 2005)

The *spaces* dimension refers to the platforms and opportunities for participation and action, including closed, invited and claimed spaces (Pantazidou 2012; Gaventa 2006). *Closed spaces* refer to situations

where decisions are made by a select group of actors with the open exclusion of others (Pantazidou 2012; Gaventa 2006). Closed spaces are where elites such as bureaucrats, politicians, experts, managers and leaders make decisions without consulting or involving others. In *Invited spaces,* there is wide involvement of actors (Pantazidou 2012; Gaventa 2006). *Created/invented spaces* refer to forums of participations created by powerless or excluded groups, from their own initiative (Pantazidou 2012; Gaventa 2006). Examples include social movements and community associations or simply natural places where people gather to debate and discuss issues that concern them.

The *forms* dimension of the cube refers to how power is manifested and includes its visible, hidden and invisible forms (Pantazidou 2012; Gaventa 2006). *Visible* power is one that is exercised in public spaces or formal decision making bodies (Pantazidou 2012; Gaventa 2006). For example, within the health sector, the influence exerted by senior decision makers within formal decision making mechanisms such as budgeting committees is a visible form of power. *Hidden* forms of power on the other hand are exercised prevent other actors from participation while maintaining power among a few actors (Pantazidou 2012; Gaventa 2006). This is achieved ensuring that key issues are excluded from the public arena, or by manipulating decision making behind the scenes (Pantazidou 2012; Gaventa 2006). *Invisible* power on the other hand involves "the ways in which awareness of one's rights and interests are hidden through the adoption of dominating ideologies, values and forms of behavior by relatively powerless groups themselves" (Pantazidou 2012; Gaventa 2006). Sometimes this is also referred to as the internalization of powerlessness.

Finally, the *levels* dimension of the cube refers to the different layers of decision-making and authority that includes global, national and local (Pantazidou 2012; Gaventa 2006). In the health sector decision making on health system issues by institutions such as the WHO or the World Bank, meetings associated with global agreements and treaties are examples of global levels were power is exercised. Decision making at the macro level by governments, the private sector and development partners constitute the national level. In many countries, local governments play an important role in health policy implementation. This is especially so in decentralized systems where significant functions and authority have been transferred from national governments to local governments. This level is considered to be the local level where power can be exercised.

Though visually presented as a cube, each side of the cube is a dimension of relationships rather than a static set of categories (Pantazidou 2012; Gaventa 2006). Further, the dimensions of the power cube constantly interact, shaping the synergies of power in organizations (Pantazidou 2012; Gaventa 2006).

For instance, what happens at national level can have an impact on the spaces available for participation and engagement at the local level.

Another relevant framework in the analysis of power is the *expressions of power* proposed by VeneKlasen and Miller (2002) which postulates that power is expressed in four main forms namely: 1) power over; 2) power to; 3) power with, and; 4) power within (Table 4:1) (VeneKlasen & Miller 2002; Lehmann & Gilson 2013). An advantage that has been assigned to this framework is the fact that it recognizes positive attributes of power and allows actors to view power as something positive that they can possess (Pantazidou 2012).

Table 4. 1: Four expressions and sources of power*

FORMS OF POWER	DEFINITION
Power over	Power over is exercised by taking it (power) from someone else, and then, using it to dominate and prevent others from gaining it
Power with	Power with is exercised by finding common ground among different interests and building collective strength
Power to act	Power to act refers to the capacity for individual and groups to shape their life and world and create more equitable relations and structures of power
Power within	Power within refers to individuals sense of self-worth, values and self-knowledge which is central to individual and group understanding of being citizens with rights and responsibilities'

*Adapted from Lehmann and Gilson (2012)

Power 'over' refers to the ability of powerful actors to influence the thoughts and actions less powerful actors (VeneKlasen & Miller 2002; Lehmann & Gilson 2013). Power over often has negative connotations including repression and coercion. Having power means that it has to be taken from someone else and used to dominate others and prevent them from gaining it. For example, those who control decision making and resources have power over those without. The three other forms of power provide positive ways of expressing power. *Power 'to'* refers to the unique potential of every person to influence their life and world (VeneKlasen & Miller 2002; Lehmann & Gilson 2013). *Power to* can provide an opportunity for joint action among actors, or *power with*. *Power 'with'* refers to the synergy that results from collaboration with others, or through collective action (VeneKlasen & Miller 2002; Lehmann & Gilson 2013). *Power 'within'* refers to gaining a sense of awareness, self-identity and confidence that is a precondition for action (VeneKlasen & Miller 2002; Lehmann & Gilson 2013). It has to do with a person's sense of self-knowledge and self-worth.

Rather than being contradictory, the three frameworks for examining power in organizational and policy settings are complementary given that each explores a different, but important, aspect of power. For example, actor interface analysis can be a useful framework for identifying and specifying the platforms of interactions between groups of actors, while the power cube and expressions of power framework can both be used to explore power dynamics within these interfaces more deeply. The analysis by Lehmann and Gilson (2013) is an example.

4. 3 CHAPTER SUMMARY

In this chapter, I have introduced and discussed relevant organizational theories. We see that organizational theories have evolved from theories that looked at organizations in a reductionist and mechanistic manner, where various components were considered in isolation, to the more recent perspective of organizations as dynamic systems. CAS theory, a brand of systems thinking, has been introduced with some examples of its applications in healthcare given. It has also emerged that in looking at healthcare organizations as dynamic systems, organizational software is at least as important as hardware aspects. A key component of CAS is the role of agents and their interactions. Power, which influences the interactions among organizational actors, is introduced and analytical approaches used to assess power relations among actors discussed. Understanding these theories that relate to organizational dynamics is important given that this thesis aims to examine an issue (priority setting) within an organizational context (hospitals). In the next chapter, I will outline the study methods that were employed in this thesis.

CHAPTER V: STUDY METHODS

5. 1 INTRODUCTION

The previous three chapters presented literature on, and related to, priority setting in hospitals. One of the primary observations from the synthesis and analysis of literature, particularly those presented in the reviews chapter (chapter three), is that there is a dearth of literature that examines and/or evaluates priority setting practices in hospitals, especially in developing countries. There is therefore a need for further work in this area. This chapter now describes the methods used to examine and evaluate priority setting practices in county hospitals in Kenya. The chapter begins by presenting the conceptual and theoretical frameworks that have guided and shaped the design and conduct of the study, and interpretation of findings. This is followed by a presentation of the study design, and a detailed description of the selection of cases and participants, data collection procedures, data management processes and analytical approach. The next sections present, in turn: the interpretive framework of the study; my positionality in the research process; the measures taken to ensure rigor in the study; the study's claims to generalizability; steps taken to ensure that the study adheres to principles of research ethics, and; the study limitations. Finally, a summary of the chapter is presented.

5. 2 CONCEPTUAL AND THEORETICAL FRAMEWORKS

In chapter one of this thesis, I outlined the purpose of this thesis as descriptive-explanatory on the one hand, and normative or evaluative on the other. Each of these components of the study has been guided by conceptual and theoretical frameworks that will be outlined in this section.

5. 2.1 Describing Priority Setting

Literature suggests that healthcare priority setting should be considered as part of the policy process (Goddard et al. 2006; Sibbald 2008; Ham & Glenn 2003). This is corroborated by the literature review on hospital level priority setting practices carried out as part of this thesis (3.2), where it emerged that factors that influence or interact with hospital level priority setting seem to coalesce around the four interrelated components of the policy processes, namely process, content, context and actors (3.2). On the basis of this literature review, and drawing on policy analysis frameworks (Walt & Gilson 1994; Buse 2007; Gilson et al. 2008), this study adopts a conceptual framework based on four interrelated areas (Figure 5.1):

- **Context:** What contextual issues influence the priority setting processes, including financing arrangements, decision space, and leadership and management practices?

- **Content:** What priority setting guidelines are in place, and what criteria are used to allocate resources?

- **Process:** What are the procedures and tools hospitals should use to set priorities? Are these procedures and tools used? If not why not?

- **Actors:** Who are the relevant internal and external actors involved in the priority setting process? What are their roles, interests, level of influence and power relations? How does this influence priority setting practice?

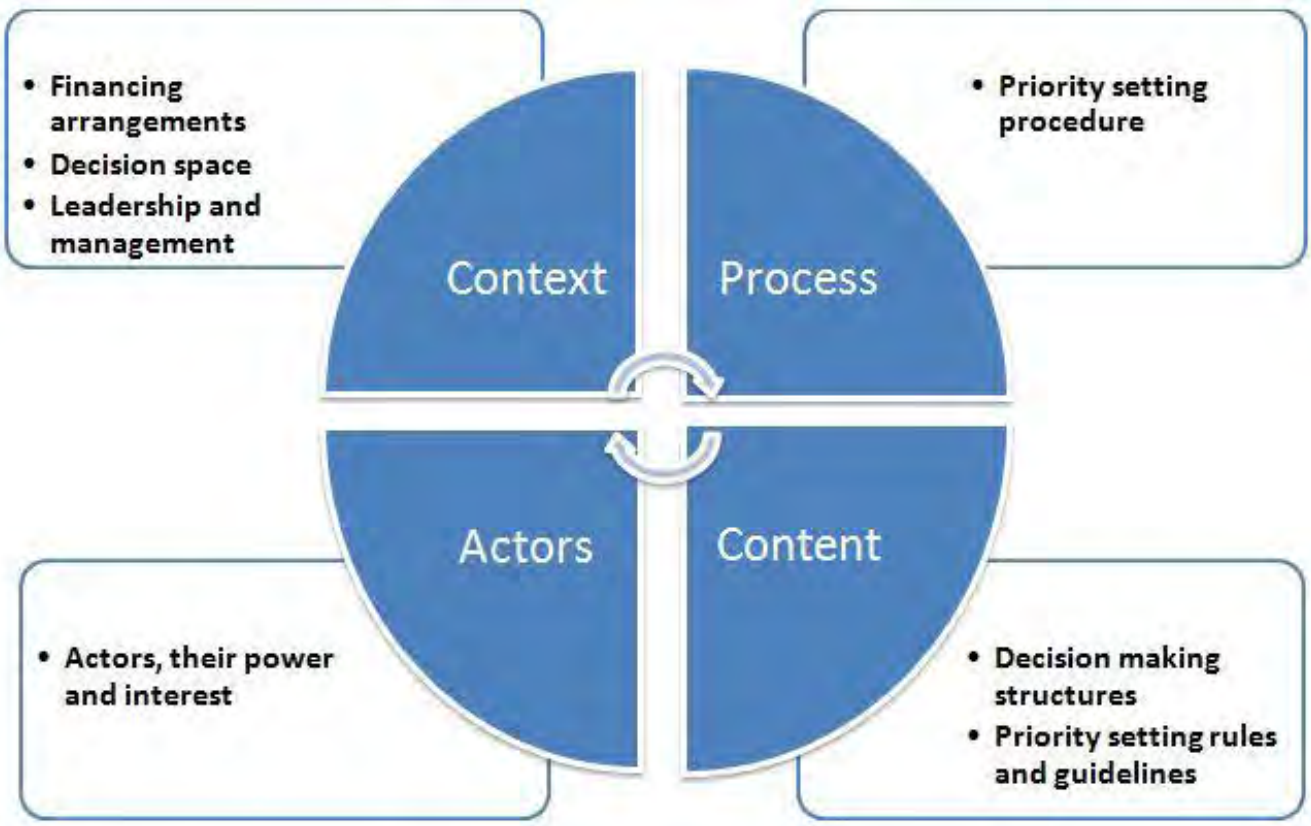


Figure 5. 1: Framework for Examining Priority Setting Practice in Hospitals

This conceptual framework informed the design of the data collection tools, as well as the development of the coding themes in the analysis of the data.

5. 2.2 Explaining Relationships

In explaining the findings of the thesis, I employed Complex Adaptive Systems Theory (CAS) (4.2.3). This theory was adopted given the observation that hospitals are complex systems with multiple agents and components. CAS metaphors have found relevance in explaining complex phenomena in healthcare organizations (Begun et al. 2003; Health Foundation 2010) and will be used here to explain the observations of the complex relationships between actors and components within the case study hospitals. To unpack further the hospital system, the framework proposed by Aragon (2010) and adapted by Elloker and colleagues (2012) on organizational capacity is relevant (4.2.3). In this framework, healthcare systems are seen to be composed of hardware and software components (Elloker et al. 2012). Hardware components include such factors as infrastructure, technology and resources. System software includes the tangible software of management knowledge and skills and organizational systems and procedures and intangible software of values and norms, relationships and power.

5. 2.3 Evaluating Priority setting

Section 3.3 of chapter three presented a review of literature on priority setting evaluation with the aim of developing a framework for the evaluation of priority setting in healthcare organizations. Arising from this review, I developed a framework that sees priority setting as being successful if (Figure 5.2):

1. It is based on values drawn from the community
2. Decisions are targeted at maximizing benefits while at the same time incorporating equity considerations
3. The priority setting process meets the procedural conditions of:
    a. stakeholder engagement
    b. stakeholder empowerment
    c. transparency
    d. use of quality information
    e. revisions
    f. enforcement, and
4. The priority setting process yields the following results:
    a. stakeholder satisfaction
    b. stakeholder Understanding
    c. shifted priorities (reallocation of resources) and
    d. implementation of decisions

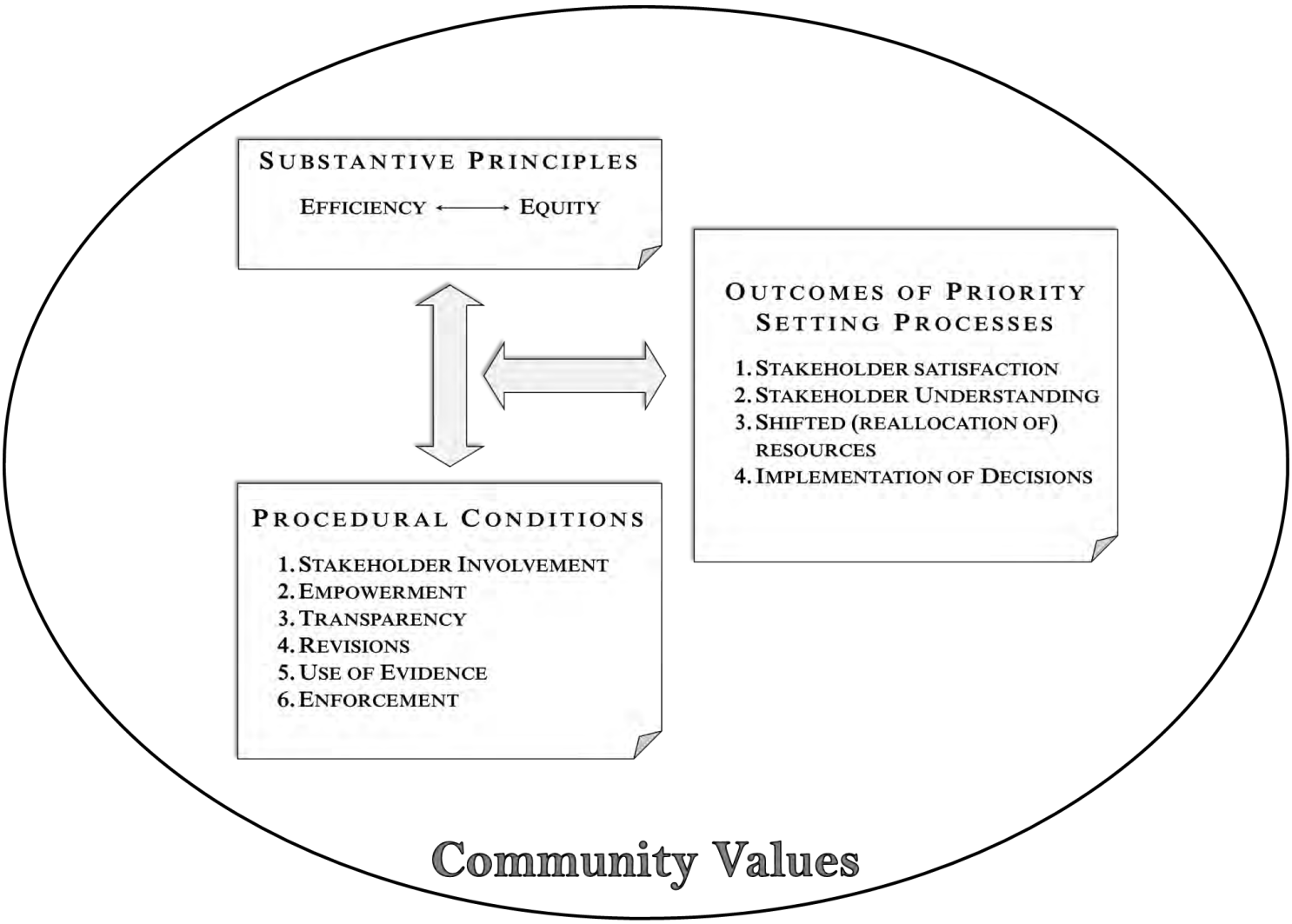


Figure 5. 2: Framework for Evaluating Priority Setting in Healthcare Organizations

This framework has been applied in this thesis to evaluate priority setting practices in the case study hospitals.

5. 3 STUDY METHODS

5. 3.1 Study Design, Selection of Cases and Data Collection

Study Design

This study employed a qualitative exploratory-explanatory case study design. A case study has been defined by Yin (1994) as "an empirical inquiry that investigates a contemporary phenomenon within its real life context". In a case study, a phenomenon is examined and analyzed in detail and depth using research tools that are most appropriate to the nature of the inquiry (de Lange & Flyvbjerg 2011). In the review chapter of this thesis, it is apparent that the qualitative case study methodology is the most used

methodology for analyzing priority setting practices in healthcare institutions (3.2). This is emphasized by Martin and Singer (2003) who recommend that an important initial step of a strategy to improve priority setting involves describing actual priority setting in context using qualitative case study methods. In this study, two county hospitals in the coastal region of Kenya formed the cases. The factors that informed the selection of these hospitals will be discussed in a later section.

A number of features of the case study approach informed its adoption for this inquiry. First, the case study approach is considered suitable to inquiries into phenomena that are highly contextual and where the boundaries between what is being studied and the context are blurred. It has been observed by several authors that priority setting practices in hospitals are highly context dependent (Kapiriri & Martin 2010; Martin & Singer 2003; Gibson et al. 2004). In the review chapter of this thesis, it was demonstrated that priority setting practices in hospitals are often influenced by contextual factors such as resource gaps, financing arrangements, decision space, management decision making capacity and leadership approaches. The case study approach is useful in building an understanding of the contextual influences on the phenomena of interest (Yin 2003; de Lange & Flyvbjerg 2011). Thus, case studies always involve relating particular events or actions to their contexts, which may be local or global, political, economic or social, and are useful in seeking to reach a deeper understanding of the ways in which wider forces are manifested at the local level.

Second, the case study approach is considered appropriate for the study of complex social phenomena (Yin 2003; de Lange & Flyvbjerg 2011). Priority setting is considered a complex social process that confronts decision makers with significant theoretical, political, and practical obstacles (Hauck et al. 2004; Shayo et al. 2013; Klein 1998). It often involves a range of actors with varied values that are brought to bear in decision making. As observed by Flyvbjerg (2001), social processes are complex and unlikely to yield universal truths or accurate predictions. An appropriate analysis should therefore aim to develop concrete, context dependent knowledge (Flyvbjerg 2001). Third, case study methodology is considered particularly suitable in examining and unpacking power dynamics as well as the role of values in social processes (Flyvbjerg 2001). This emphasizes the suitability of this approach to the study of priority setting processes given that actor power, interests and relations have been shown to significantly influence priority setting processes. Finally, case studies are also suited to obtaining multiple perspectives and experiences of a wide range of different stakeholders (Yin 1999).

This study had an initial exploratory phase and a subsequent explanatory phase. The exploratory phase was considered useful given that priority setting in hospitals in Kenya had not been previously studied

and hence there was limited information about the types, nature and forms of priority setting activities in Kenyan county hospitals. In the exploratory phase, I sought to map out the types of priority-setting activities that occur in two case study hospitals, the organization and structure of these activities, the key actors involved in the process, and the relevant decisions they make. I also used this phase to identify priority setting activities that I subsequently studied in greater depth in the subsequent explanatory phase of the study. The explanatory phase focused on 3 priority setting decisions that I studied prospectively within each case study hospital. In essence therefore, this was a nested case study design, where the selected county hospital were cases, while the three priority setting activities in each hospital were sub-cases, nested within the case study hospitals (Figure 5.3) .

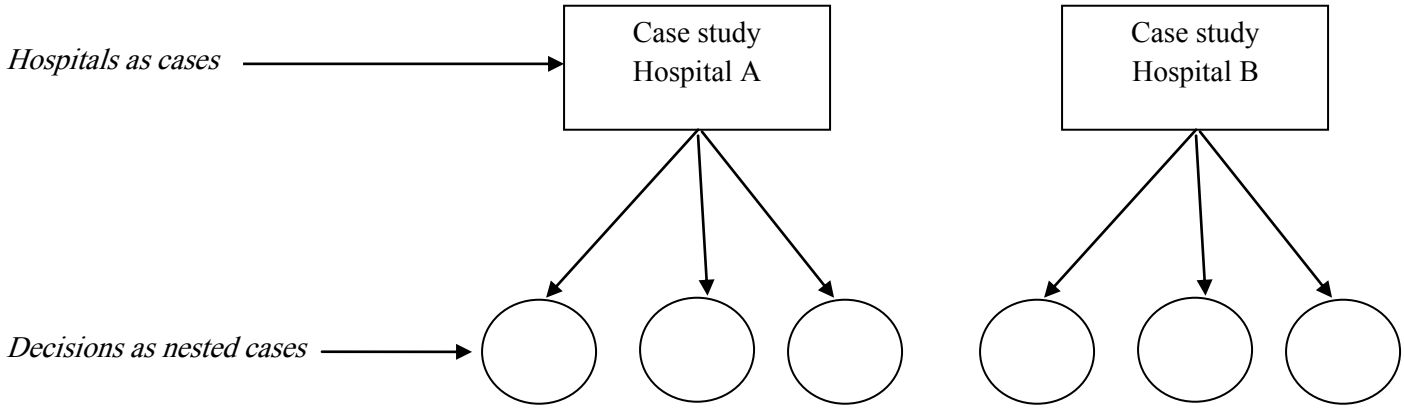


Figure 5. 3: Study Cases

In both phases, I collected data by a combination of key informant and in-depth interviews of hospital decision makers as well as other identified stakeholders, review of relevant documents including hospital plans, budgets, minutes of meetings, non-participant observation and a researcher diary method. I selected these data collection methods partly for their utility in achieving both breadth and coverage across issues of interest, and the depth of coverage within each (Ritchie & Lewis 2003). I also considered logistical feasibility of data collection methods. It is problematic, for example, to use group methods such as focus group discussions with hospital decision makers and frontline practitioners who can find it difficult to ensure they are available in a pre-arranged place at a specific time.

Study Cases

Hospitals as Cases

The two hospital cases were selected purposefully guided by the following criteria: 1) public level 4 hospitals that were designated as county hospitals; 2) hospitals with a high local resource level and those with a low local resource level; 3) researcher convenience and access to the hospital; and 4) hospitals

which had relationships with either my institution (the KEMRI-Wellcome Trust research programme) or someone within my institution. This last criterion was important because prior discussions with research colleagues and individuals who had experience working in public hospitals in Kenya revealed that the subject of priority setting was likely to be viewed as political and sensitive. This is because it would involve observing, asking questions and reviewing documents such as budgets and other accounting records. It was likely therefore that I would be perceived as conducting a form of audit and encounter some resistance from the hospital administrators and a lack of willingness to participate in the study. By identifying hospitals with prior contact/relationship or linkage with my institution, I aimed to minimize trust concerns and make it easier for hospitals to accept and allow me to gain entry and conduct the study.

In line with the case study methodology, the selection criteria aimed to identify hospitals that were rich in information as opposed to representativeness. I thus endeavored to select cases with varying characteristics and experiences. Based on the selection criteria, 2 county hospitals were selected in the coastal region of Kenya: 1) Malindi county hospital in Kilifi County and 2) Port Reitz county hospital in Mombasa County. A brief background of each of the hospitals and their settings follows.

Malindi County Hospital

Malindi county hospital is a public hospital located in Malindi town in Kilifi County. Kilifi county has an estimated population of 1,109,735 and a poverty rate (poverty head count of people living below the Kenya poverty line) of 66.9%, ranking it at number 9 poorest among the 47 Counties in Kenya (CRA 2011). Malindi County hospital has an estimated catchment population of 264,027 (MDH 2012), an estimated annual admission of 8,000 and an estimated annual outpatient visit of 60,000. The hospital has a bed capacity of 183 and an estimated annual cash budget of USD 350,000.

Port Reitz County Hospital

Port Reitz county hospital is a public hospital located in Mombasa town in Mombasa County. Mombasa County has an estimated population of 939,370 and a poverty rate of 37.6%, ranking it at number 37 poorest among the 47 Counties in Kenya (CRA 2011). Port Reitz hospital has an estimated catchment population of 96,388 (PRDH 2011) an average annual admission of 5,000 and average annual outpatient visits of 60,000. The hospital has a bed capacity of 166 and an average annual cash budget of USD 280,000. More than a third of Port Reitz hospital beds are permanently occupied by psychiatric patients. This can be explained historically. Port Reitz hospital was initially established as a specialist mental hospital but later transitioned to a district hospital offering care to general patients. The hospital however

continues to receive psychiatric referrals from other hospitals in the region and hence continues to serve as a "quasi-specialty" facility.

These two hospitals differ in a number of ways. Malindi county hospital is larger, in terms of bed, capacity compared to Port Reitz county hospital. Also, given the "quasi-specialist" status of Port Reitz county hospital, Port Reitz has higher resource needs given that the medical needs of psychiatric patients are significantly more costly than those of patients with general conditions. Further, given that user fees are one of the main revenue streams for hospitals, and mental health services in hospitals are offered for free, Port Reitz county hospital's capacity to generate revenues is significantly reduced compared to Malindi county hospital. This is contrasted against the fact that Malindi county hospital receives a greater share of central government allocation, and higher levels of local revenues compared to Port Reitz county hospital. Furthermore, Malindi county hospital has an active donor community and receives far more support from locally based non-governmental organizations than Port Reitz. The resource gaps in these hospitals, their respective sizes and the nature of healthcare demand that they face are thus different. These factors provided a rich diversity between the hospitals that made them suitable as comparative cases. Table 5.1 outlines some significant characteristics of the case study hospitals.

Table 5. 1: Characteristics of Case Study Hospitals

CHARACTERISTIC	MALINDI COUNTY HOSPITAL	PORT REITZ COUNTY HOSPITAL
Estimated Annual outpatient visits	60,000	60,000
Estimated Annual inpatient admissions	8,000	5,000
Estimated Annual monetary budget (USD)	350,000	280,000
Number of staff	234	236
Number of beds	183	166

Decisions as Nested Cases

In the exploratory phase of the study, I engaged hospital decision makers in a discursive process of recalling, suggesting and listing priority-setting activities that they considered suitable for in-depth analysis in each hospital. The exercise of selecting priority setting activities was thus consultative. I used three criteria to select priority-setting decisions/activities that I would later examine as nested cases within each of the two case study hospitals: 1) a priority-setting case had to have evidence of availability and reliability of information sources about it; 2) the activity had to have a clearly defined beginning and end; and 3) the hospital had to give full consent to the study of a selected priority-setting case. Based on this process and these criteria, I selected three priority setting activities for in-depth study:

1. The hospital budgeting and annual work planning process
2. Medicine selection decisions in the hospital
3. Nursing allocation to hospital departments in the hospital

Hospital budgeting and planning comprised two interrelated activities; the annual work planning process and the quarterly budgeting process. Every year, the hospital prepared annual work plans, a process that involved the identification of hospital priorities and selection of interventions to target these priorities as well as determine their costs. This was then followed by a quarterly budgeting process where all available hospital resources were assessed and allocated to hospital departments and services. I selected the hospital budgeting and planning process because it was perhaps the most important priority setting activity in the hospital given that all other priority setting activities in the hospital are, in theory, anchored to these processes. Further, it was the most formal priority setting activity in the hospital - with procedures and defined activity schedules - and thus relatively easy to observe.

I selected the medicines selection and nursing allocation processes because medicines and human resources consume significant healthcare resources in these hospitals as in many other healthcare contexts (MSH 2013). The nursing cadre of healthcare workers formed the largest proportion of staff in both hospitals. Also the medicine selection and nursing allocation processes offered an interesting contrast to the hospital budgeting and planning process given that while the latter was a relatively formalized process that occurred at predetermined and discrete time periods, medicine selection and nursing allocation processes were often reportedly informal and/or ad hoc processes that occurred at irregular timeframes. Also, the hospital planning and budgeting process involved a wide range of stakeholders and was driven by the hospital senior management, as opposed to the medicine selection and nursing processes which were driven by specific departments (pharmacy and nursing respectively). The selection of these nested cases therefore offered an opportunity to examine the unique characteristics of both formal and informal priority setting practices in these hospitals.

Study Participants

This study sought to understand priority setting practices through the views of hospital decision makers and other stakeholders. The selection of participants for interviews was therefore purposive with the aim of selecting individuals who had an in-depth knowledge of the identified priority setting activities, and those who took part in or were affected by these priority setting activities. This included senior and middle level hospital managers, frontline practitioners and members of decision making committees.

Within hospitals the senior management was constituted in the form of an executive expenditure committee (EEC) which comprised of the medical superintendent (who was the chief executive of the hospital), the administrative officer, the accountant, the procurement officer and the pharmacist in charge. All these members of senior management were selected for interviews in each hospital. Middle level managers formed the hospital management team (HMT), which was a committee that was comprised of all hospital heads of department. Members of this committee were also selected for interviews. For medicines selection decisions, the medicines and therapeutics committee (MTC) members were selected for interviews. The MTC was a multidisciplinary committee that comprised members from clinical specialty, pharmacy and nursing. This committee, in theory, made decisions about which medicines to select and include in the hospital formularies. Front line practitioners, namely clinicians (clinical officers and medical doctors) nurses and pharmacists were also selected for interviews. Given that priority setting in hospitals has been shown to be significantly influenced and guided by central ministries of health, key informants within the planning departments of the ministry of health services were also selected for interviews.

Formal sample size calculations are not appropriate for this case study form of investigation as the aim is to explore themes in depth rather than claim that data are 'statistically representative'. The number of participants was hence determined by theoretical saturation, where selection of participants within the four groups (central MOH officials, senior, middle level managers and frontline practitioners) was stopped when no new information was forthcoming. In total, 72 participants were selected for in-depth interviews, 35 from Malindi county hospital, 32 from Port Reitz county hospital and 5 from the central ministry of health. Table 5.2 outlines the number of participants selected in each hospital under each category.

Table 5. 2: Number of participants selected in each hospital under each category

CATEGORY OF PARTICIPANTS	NUMBER OF PARTICIPANTS	
National-level key informants	5	
	MALINDI COUNTY HOSPITAL	PORT REITZ COUNTY HOSPITAL
Senior managers	6	6
Mid-level managers	22	19
Front-line practitioners	7	8
Hospital sub-total	35	32
Study total	**72**	

Study Strategy

As indicated earlier, the study had an initial explorative phase and a subsequent explanatory phase. In both of these phases, data were collected through in-depth interviews, document reviews, non-participant observations and a research diary. In this section, the two phases of the study and the data collection methods are described in turn.

Exploratory Phase

The exploratory phase of the study was aimed at initiating contact, building trust between me and the hospital staff and obtaining an understanding of the types, forms and nature of priority setting activities in the case hospitals. In each hospital, I made an appointment for an initial visit to introduce myself with the medical superintendent, who is the chief executive of the hospital. For this initial visit, I was accompanied by a colleague who had prior contact and a working relationship with the medical superintendent. During this visit, I introduced myself and the objective of my study, and outlined the plans for my research work. Given the perceived sensitive nature of my inquiry into for instance how resources are managed in the hospital, it was imperative at this stage to clarify and emphasize that my study was not intended as an audit of the hospital's management of resources but rather as an examination of decision making processes. This assurance was critical in gaining access to the hospital, and in making the hospital staff comfortable and trusting enough to share views, information and data sources.

After this initial introduction, I was introduced to the other departmental heads by the medical superintendent, who explained the purpose of my presence in the hospital and requested them to provide me with the necessary support. I subsequently requested and undertook in-depth interviews with the senior managers of the hospital, namely the medical superintendent, the administrative officer, accountant, pharmacist, nursing officer in charge and the procurement officer. These initial interviews were undertaken using interview guides that explored general questions about the hospital context and priority setting activities (Appendix V). The interviews were augmented with document reviews, non-participant observations and a researcher diary. A total of 2 weeks was spent in each hospital in the exploratory phase. A key output was the identification of priority setting activities that would be examined in depth in the explanatory phase, the mapping of key stakeholders and sources of information including documents and observation targets such as meetings, and the gaining of the trust of hospital staff. These outputs were critical in enabling the subsequent explanatory phase, described next.

The Explanatory Phase

The explanatory phase immediately followed the exploratory phase and was conducted over 3 months in each hospital. During this phase, I conducted in-depth interviews, reviewed relevant documents, conducted non-participant interviews and kept a researcher diary. These data collection methods were targeted at examining the three selected priority setting activities in the hospital. While I initially had fears about how open and accepting the staff would be towards an outsider asking questions, reviewing documents and observing perceived sensitive activities such as hospital budgeting and senior management meetings, I was pleasantly surprised by how open and welcoming the staff were in both hospitals. This was made possible by my spending time in the hospital during the exploratory phase where I got to know staff and repeatedly clarified my aims. Further the length of time I spent in each hospital (3.5 months including the exploratory phase) allowed me to interrogate issues gradually, while building trusting relationships with the hospital staff. This allowed the hospital staff to identify with me and come to regard me as one of them. Hospital staff were thus quite free and open with me and often volunteered crucial information and guided me on where to look for relevant data. The data collection methods used will now be described in greater detail.

Data Collection Methods

This section details the methods used to collect data. Specifically, I will discuss the use of in-depth interviews, non-participant observations, document reviews and a researcher diary.

In-depth Interviews

I used interviews to obtain in-depth information about the identified priority setting practices from the perspective and experiences of the hospital decision makers, front line practitioners and national level informants (Kvale 1996). I invited those identified as possible interviewees to take part in the study after the purpose of the study had been explained to them and after they had provided written, informed consent (Appendix IV). Consent was requested for the use of a digital tape recorder to allow the whole interview to be captured (and later transcribed) while I (as the interviewer) also took my own notes. In two instances, respondents refused to be tape recorded. Each interview took between 30-45 minutes. In depth interviews employed topic guides (Appendix VI - IX) that were informed by the study's theoretical and conceptual frameworks as well as by observations and earlier interviews conducted in the exploratory phase of the study. I endeavored to conduct the interviews at the convenience of the interviewee and in a place that provided for confidentiality to be preserved and for the interviewee to feel comfortable. This was however not always possible: in some instances I had to conduct interviews in busy outpatient areas or wards since the staff could not find time to leave their working areas. In these instances, interviews

were sometimes disrupted by noise and staff often had to attend urgent requests from other staff or clients mid interview.

Document Reviews

I reviewed documents relevant to the priority setting activities selected for the study, including the hospital 5 year investment plan, hospital annual work plans (AWPs), hospital quarterly budgets, and minutes from hospital management committee (HMC), hospital management team (HMT), executive expenditure committee (EEC) and medicines and therapeutic committee (MTC) meetings. I also reviewed accounting records and documents recommended by key informants as likely to contain relevant information. These documents were selected for two financial years (2011 – 2012 and 2012 – 2013). I made efforts to verify that the required documents were available, accessible and authentic. I also considered the completeness and representativeness of the documents to try and minimize bias. I employed a data collection checklist (Appendix X) to guide the abstraction of data from the documents. The types and number of documents I reviewed in each hospital are outlined in table 5.3.

Table 5. 3: Types and Number of Documents Reviewed in each Hospital

TYPE OF DOCUMENT	NUMBER OF DOCUMENTS REVIEWED	
	MALINDI COUNTY HOSPITAL	PORT REITZ COUNTY HOSPITAL
Quarterly Hospital Budgets	8	8
The AWPs	2	2
Minutes of AWP meetings	2	2
Minutes of HMT meetings	8	8
Minutes of HMC meetings	8	8
Minutes of EEC meetings	8	8
Minutes of MTC committee meetings	2	4
Minutes of nurses meetings	4	6
Revenue and expenditure reports	8	8
Hospital investment plans	1	1

Non-Participant Observation

I spent 3.5 months in each of the case study hospitals conducting non-participant observations. These took the form of sitting in and observing hospital quarterly budgeting meetings, AWP meetings, senior

management meetings and medicines and therapeutic committee meetings. Table 5.4 outlines the types and number of meetings I sat in and observed in the two case hospitals.

Table 5. 4: Types and Number of Formal Meetings Observed in the Case Hospitals

TYPE OF MEETING	NUMBER OF MEETINGS ATTENDED	
	MALINDI COUNTY HOSPITAL	PORT REITZ COUNTY HOSPITAL
Quarterly Hospital Budgets	2	2
AWP meetings	1	1
EEC meetings	1	1
MTC committee meetings	-	1

I also spent time with and interacted with hospital workers, and held informal discussions with them about priority setting practices in the hospital. During this time, I spent time in key departments/offices where priority setting activities took place such as the hospital administrator's office, the accounts department, the pharmacy department and the nursing department. The procedure involved "the systematic detailed observation of behavior and talking: watching and recording what people do and say" (Mays & Pope 1995).

An *overt* approach to observation was adopted: that is, the hospital staff members were aware of my presence and the objectives of the study. However, beyond brief introductions at the start of the meetings, I adopted an unobtrusive approach to observation. I used a free note-taking approach aided by a checklist whose development was guided by the study's conceptual and theoretical framework (Appendix XI).

I found this particular form of data collection very useful in elucidating issues that were either not covered or raised in formal interviews. Some subtle realities such as the relationships between actors and the expression of actor power that were difficult to capture in documents and interviews also emerged over time in observations.

An interesting part of the observations was the informal conversations I had with hospital staff while spending time with them. Such interactions occurred both in and out of the hospital. The latter took the form of planned and/or chance meetings in social places, lunch or end of working day breaks. It was fascinating to observe that staff were often more free and provided vital information during these "out of office" informal interactions compared to the information provided during formal work hours or settings. This underscores the utility of the prolonged engagement with the hospitals, in line with the case study methodology. This time allowed for relationships to form between myself and hospital staff, which made

it easier for them to feel comfortable to provide presumably sensitive information. However this also raised ethical dilemmas, as described in more detail below.

The Diary Method

I documented a personal account of events, feelings, discussions and interactions in the form of an unstructured diary during the duration of data collection in the case hospitals (Appendix XII). Qualitative diaries are a useful method of data collection in qualitative research given that they give access to rich experiences and generate enormous amounts of detail which would otherwise take long periods of interviewing. They are also a very useful accompaniment to the observation method, since they allow for capturing and documentation of both objective observations and researcher impressions in real time and minimize recall bias on the part of the researcher.

5.3.2 Data Management and Analysis

All recorded interviews were transcribed into MS Word and stored in password protected computers. All notes taken during interviews, documents for review, the researcher diary and voice recorders were always stored under lock while in the field and even after field work so as to ensure participant confidentiality. Interview transcripts were cleaned and, together with field notes, observation summaries and documents, imported into NVIVO 10 for coding.

Data were analyzed using a modified framework (thematic) approach. Framework analysis is a process that involves identifying connections between the data collected and a pre-determined thematic framework by sifting, sorting, coding and charting collected data (Richie & Spencer 1994). This approach was adopted so as to provide findings and interpretations that are relevant to policy and also to provide pragmatic recommendations. However the approach was modified to include an initial open coding step to allow for emergence of important themes which might not have been captured in the study's theoretical frameworks. I undertook 5 steps in the analysis namely: familiarization, development of a thematic framework (through coding), open and axial coding, charting and finally, mapping and interpretation (Richie & Spencer 1994).

a) Familiarization

Given that I had collected the data myself, I had developed prior knowledge and analytic interests and thoughts on the data. However, to gain a deeper familiarity with the data, I actively and iteratively read through the interview transcripts, as well as observations and document review notes at the analysis stage

while searching for meanings, patterns and ideas, and potential themes. This phase also included the taking of notes on ideas for coding that I would then go back to in the subsequent phase.

b) Development of a Thematic Framework

The second step involved the development of a thematic framework which took the form of a coding tree (Appendix XIII). The development of this framework was informed by the study's theoretical frameworks and the initial thoughts and ideas that emerged from the data.

Open and axial coding

The next step involved the production of codes. Coding is regarded as part of analysis (Miles & Huberman 1994) as it involves identifying, organizing and labeling chunks of data in meaningful groups (Tuckett 2005). I coded the data in two steps namely *open* and *axial* coding. In open coding, concepts and ideas that related to lines, sentences and paragraphs of transcripts, documents and observation notes were identified and labeled to form open codes. In axial coding, I examined the open codes and grouped them into the sub-codes and codes developed from the overarching categories or domains of the thematic framework developed in step 2. A schematic of this coding process is provided in appendix XIV.

Charting

In the next step I charted the coded data, a process that entailed the reorganization of coded data so as to allow the identification of emerging themes. This involved reading through coded data under each category of the thematic framework and summarizing the ideas, supported by quotes from the data. Charting followed a thematic approach (Richie & Spencer 1994) where individual themes were described across respondents or categories of respondents. This process resulted in summaries of ideas on each thematic heading drawn from all data sources (interviews, documents, observations, diary notes). An excerpt of the chart is provided in appendix XV.

Interpretation

I subsequently critically examined the charted data under each thematic category. Interpretation of the data entailed identifying key concepts and explaining relationships between these key concepts. Also, it entailed explaining relationships between the data and theoretical assumptions and identifying messages that are relevant to policy makers.

5.4 INTERPRETIVE FRAMEWORK

The purpose of this inquiry is to produce knowledge that will identify the gaps in priority setting and resource allocation practices in Kenyan public hospitals and formulate policy relevant proposals. Therefore, a *pragmatic* interpretive framework seemed fitting for this analysis. Pragmatism as an interpretive framework in qualitative research focuses on the outcomes of the inquiry rather than the antecedent conditions (as in post positivism) (Creswell 2007). It concerns itself with "what works" and therefore seeks to identify solutions to problems (Patton 1990). Pragmatic inquiry therefore does not confine itself within specified philosophical assumptions and/or attendant methods, but rather, draws, from a range of methods and perspectives to produce knowledge that aids in improving situations (Rossman & Wilson 1985; Cherryholmes 1992; Murphy 1990). Powell (2001, p.884) argues:

> "*The pragmatist epistemology stands in contrast to prevailing positivist and anti-positivist views of scientific discovery. Whereas positivism emphasizes the objective, law-like properties of a brute reality independent of observation (Donaldson, 1992; Wicks and Freeman, 1998), anti-positivism emphasizes the creative role of active, subjective participants, none of whom owns a privileged claim on truth (Burrell and Morgan, 1979; Astley, 1985; Martin, 1990). Pragmatism, on the other hand, rejects positivism, on grounds that no theory can satisfy its demands (objectivity, falsify-ability, the crucial experiment, etc.); and rejects anti-positivism, because virtually any theory would satisfy them. As such, the pragmatist proposes to reorient the assessment of theories around a third criterion: the theory's capacity to solve human problems (Rorty, 1989; Stich, 1990). To a pragmatist, the mandate of science is not to find truth or reality, the existence of which are perpetually in dispute, but to facilitate human problem-solving. According to pragmatist philosopher John Dewey, science should overthrow 'the notion, which has ruled philosophy since the time of the Greeks, that the office of knowledge is to uncover the antecedently real, rather than, as is the case with our practical judgments, to gain the kind of understanding which is necessary to deal with problems as they arise.*"

The application of the pragmatic interpretive framework is evident in a number of ways in this study. First, the objectives of the study are oriented towards describing, critically examining and evaluating priority setting practices with an aim of identifying gaps and proposing solutions. This is in keeping with the pragmatic approach that is concerned with problem solving (Rorty 1990; Creswell 2007). Second, in the development of an evaluative framework, an integrative approach that draws on a range of paradigms and concepts deemed useful was adopted, as opposed to grounding the framework in one priority setting paradigm. This is in recognition of the fact that the range of priority setting paradigms available each has

something useful to offer. Third, characteristic of the pragmatic approach, the research process employed multiple data collection methods and data collection sources (Creswell 2007; Cherryholmes 1992; Murphy 1990) including in-depth interviews, document reviews, non-participant interviews and a researcher diary. The choice of approach (qualitative case study) and data collection methods was informed by their suitability in answering the study questions. Fourth, a modified framework approach was employed in the analysis of study data. The framework approach is deductive and is the preferred method of analysis when inquiry is aimed at producing policy relevant recommendations (Ritchie & Lewis 2003). However this approach was modified to include an inductive component to allow for emergence of unanticipated themes.

In this inquiry therefore, the nature of reality (ontological belief) is what is useful or practical, and this reality is determined (epistemological belief) by the use of multiple tools of research. Characteristic of qualitative research, I recognize that my inquiry is value –laden (Creswell 2007). My values as a researcher will therefore be actively reported. The role of values (axiological beliefs) is recognized in this thesis, and will be explicated and discussed based on the assumption that the knowledge produced by this inquiry reflect both my (the researcher) and participant values. Further, as explained earlier, the research process (methodological beliefs) involves multiple approaches in recognition of the utility of the methods.

5 .5 THE ROLE OF MY POSITIONALITY IN THE RESEARCH - REFLEXIVITY

It is generally recognized that the nature and findings of qualitative inquiry are shaped, to a certain extent, by the experiences, world view and theoretical perspective of the researcher (Green & Thorogood 2007; Cutcliffe & McKenna 2002). To take into account this influence, the researcher exercises *reflexivity* (Kingdon 2005). It is thought to be an integral process in qualitative research whereby the researcher continuously reflects on how their own values, actions and perceptions influence the research process and interpretations (Gerrish & Lacey 2006; Kingdon 2005; Pillow 2003). It has been suggested that in being reflexive, the researcher's self-examination allows biases and assumptions that could affect the study to be understood (Morrow 2006). For the researcher, being reflexive entails reflecting upon their beliefs, views and experiences and considering how these might influence the research (Parker 1999).

In reflecting on the likely influence of my perceptions and experiences, it is perhaps likely that my academic training, professional experience, formed opinions and views influenced the research process in some ways. Whereas I currently look at myself as a health systems researcher based on my position and the nature of work that I do as a researcher at the KEMRI-Wellcome Trust research programme in Kenya, I initially trained as a pharmacist, and practiced as a hospital pharmacist for 3 years. Of these 3 years, one

was spent working for a public hospital and two spent working in a private hospital. This perhaps influenced my interest in focusing my research on hospitals and made it more comfortable and easier for me to spend a prolonged amount of time (7 months) doing non-participant observations in the study hospitals. My perceived professional identity as a pharmacist perhaps had an impact on my interactions with hospital staff in the case study hospitals. Researching on an issue that seemed to pit clinicians on the one hand against non-clinicians on the other (8. 3), I got the sense that clinicians perceived me to be "on their side" and were perhaps more open about their views of non-clinicians. It did not help (or perhaps did help!) that in each of the case hospitals, some of the clinicians were my former college mates in medical school. The fact that I used multiple methods, beyond interviews, may have improved the trustworthiness of the research findings.

During the time that I worked as a pharmacist in hospitals, I developed a keen interest in medicines selection processes and took an active, even leading, role in medicines formulary management processes. I was especially interested in developing systematic processes for medicines selection in hospitals and promoted the use of medicines formulary lists as rationing tools and medicines and therapeutic committees (MTCs) as decision making forums for medicine selection and use questions. I was part of the MTC in each of the hospitals I worked in and facilitated (as a trainer) trainings where hospital managers from across the country (Kenya) were trained on medicines management and specifically the roles of formulary lists and MTCs. It could be argued that this experience influenced my pre-conceived view that MTCs and formulary lists are important priority setting structures for medicines selection processes.

Further, in the course of doing this work, I developed a keen interest in the use of economic methods in decision making and tried to incorporate some form of economic analysis in decision making for medicines selection. My interest in economic evaluation drove me to pursue a post graduate degree in health economics and launched my research career. The initial research I carried out was a cost-effectiveness analysis of a complex quality improvement intervention. In what is perhaps a sign of my naivety at the time, I imagined that the evidence on the cost-effectiveness of the intervention would inform the decision by the country to adopt and scale up the intervention. I found it interesting that the intervention was adopted by a number of hospitals even before information on the cost-effectiveness of the intervention was available. This and my documented frustration on the use of economic methods to evaluate complex interventions (Barasa & English 2010) led me to ask myself; "how then do hospitals make decisions about where to allocate scarce resources?". While I held the view (and still do) that economic methods are important, my experience led me to realize the importance of other considerations in priority setting decision making. This evolution of my thoughts and perceptions led to my interest in

priority setting at the hospital level, which forms the focus of this thesis. The fact that I had experienced the inadequacy of the economic approach influenced my inclination for an integrated approach (combining consequential and procedural approaches - see 2.3) to priority setting that forms the basis of the evaluative framework used in this thesis. Developing the evaluative framework from a review of literature (3.3) I hope strengthens the trustworthiness of the processes.

From the foregoing, it is apparent that my identity, experience and perceptions are likely to influence the research process and outcomes. A number of measures were undertaken to ensure rigor and trustworthiness of the research, discussed next.

5. 6 ENSURING RIGOR OF THE STUDY METHODS

I undertook a number of measures to enhance the rigor of study methods and hence maximize the trustworthiness of this study. One strategy adopted was the use of theory to inform the inquiry (Gilson 2012); the reviews chapter (chapter 3) of this thesis has outlined the development of the conceptual frameworks that guided the design, data collection and analysis of data. Further, section 5.2 of this chapter has presented these conceptual frameworks and theory that has guided the thesis.

Also, a multiple case study design was adopted rather than a single case study. The selection of two cases allowed for cross-case analysis and to explore the replication of findings and explanations (Gilson 2012). Further, the hospital cases and nested cases within the hospitals were selected purposively to allow the initial assumptions of the study to be tested. For example, one of the study assumptions was that resource gaps would influence priority setting gaps. In the selection of cases, one of the hospital cases had greater resource gaps compared to the other. In obtaining nested cases within hospitals, I selected both informal and formal priority setting activities. This was done in an endeavor to ensure that findings of the inquiry would be applicable to as wide as possible a range of priority setting activities in hospitals. The design of the study procedures provided for my spending a prolonged amount of time (3.5 months in each case hospital) observing, interacting and collecting data in the case hospitals. This prolonged engagement allowed me to obtain first hand observation of priority setting practice, to build relationships and trust between myself and hospital staff which made it possible to obtain more honest responses from them (Yin 1999).

I also endeavored to select a wide range of respondents so as to obtain a wide range of perspectives on the same phenomena. Senior, middle level managers, frontline practitioners (doctors, clinical officers,

pharmacists, nurses, and dentists) and national level decision makers were selected. Methodological triangulation was also used (Yin 1999); I employed several data collection methods, namely in-depth interviews, document reviews, non-participant observation and a researcher diary. These triangulations allowed for comparing of findings across multiple sources of evidence (Yin 1999). The complementary nature of multiple methods of data collection was especially evident in the use of interviews and observations. While it was not always possible to elicit responses considered sensitive such as power relations between actors, spending time in the hospital observing how actors interacted and related with each other provided useful insights into how power and actor relations played out in priority setting processes.

Another way I sought to improve the rigor of the study was to share preliminary findings of the study at different stages with research colleagues so as to benefit from their feedback. To this end I presented research plans as well as preliminary findings in various forums including in-house research workshops and seminars and international workshops and conferences. For example, the data collection tools were presented to selected health systems research experts, with knowledge in the topic areas, to assess them for face and content validity. Feedback from these exercises was used to modify the tools. Throughout the study period colleagues at the KEMRI-Wellcome Trust Research programme engaged in related health systems research and I also engaged in what we called "reflective practice" sessions. These were regular formalized meetings where we shared our research plans, processes and findings, and discussed and interrogated them based on the researchers' diverse experiences and findings from their own research. This provided further opportunity to assess the trustworthiness of the research and interpretation of findings.

To enable an audit trail of the research activities, I clearly articulated the study procedures and methods in a research protocol, with documentation and records of all the research activities and an account of how the methods evolved. Lastly, reflexivity was an important part of the research process. Both personal reflexivity (critically appraising how my own values, experiences, interests, beliefs and social identity have influenced the process and outcome of the research) and epistemological reflexivity (reflecting on how the research design and conduct - how the research question was defined, choice of study design and methods, why issues are framed in particular ways, investigated in particular ways, and how these approaches lead to particular kinds of conclusions) was built into the study process.

5. 7 CLAIMS TO GENERALIZABILITY

One of the aims for conducting health systems and policy research is to build the evidence base to inform policy directions. In this regard, it is desirable that research findings in the research setting be useful in explaining other similar situations (Grbich 1999). In qualitative inquiry, a distinction has been drawn between statistical and analytic generalization (Glaser & Strauss 1967; Yin 2003). While on the one hand, statistical generalization infers from a sample the characteristics of the whole population, on the other hand, analytic generalization is a direct confrontation of the case study with an established theory (Glaser & Strauss 1967). In analytic generalization, previously developed theory is used as a template with which to compare the empirical results of the case study (Yin 2003). The theory then becomes the vehicle for examining other cases. Replication is claimed if two or more cases are shown to support the same theory (Yin 2003). In analytical generalizability, "insights derived from carefully selected cases, through a careful process of analysis, are judged to hold a sufficient degree of universality to be projected to other settings" (Robson 2002; Gilson 2012).

In this thesis, the aim is to generate findings that have analytical generalizability. The process of analysis in the study involves the development of conclusions from detailed findings about context, processes and outcomes in two case study settings, which are then lifted to a sufficient level of generality to have resonance in a different context (Gilson et al. 2011). A number of strategies were employed by the study to enhance analytical generalizability. First, the study is focused by a clearly defined research question. A clear and well focused question influences the selection of cases and the kind of data to be collected (Eisenhardt 1989). Second, the design of the study is shaped by constructs that were specified a priori (5.2.1, 5.2.3). These constructs informed the development of data collection tools and are a key component of theory building (Eisenhardt 1989). Third, while the study has a priori constructs, the data collection tools and process is designed such that it allows for emergent information (Eisenhardt 1989). Fourth, study cases were selected theoretically, to fit in theoretical categories rather than for statistical reasons (5.3.1) (Eisenhardt 1989). Fifth, the study employs multiple data collection methods (5.3.1). Triangulation made possible by multiple data collection methods provides stronger substantiation of findings (Eisenhardt 1989). Sixth, the study is characterized by overlap of data analysis with data collection. This iterative and overlapping process of data collection, coding and analysis of data provides for freedom to make adjustments during data collection (Eisenhardt 1989). Seventh, analytical generalizability is facilitated by the use of theory (5.2.2) to explain the study findings. Eighth, comparisons between the two case studies, and between the nested cases also allows for "middle range theories" derived from observations in one case to be tested and revised based on observations in other cases (Gilson 2012). Ninth, analytical generalizability is also enhanced by the comparison of emergent

concepts with extant literature (Eisenhardt 1989). As a multiple case study, the generalizations of the thesis findings are not grounded in the representativeness of the cases selected but rather in a process of abstracting from the specifics of one case to ideas that encompass several cases. These conclusions, although derived from a limited number of experiences, will provide theoretical insights that can be considered and tested similar situations (Gilson et al. 2011).

5. 8 ETHICAL CONSIDERATIONS

Before commencement of the study, I sought and obtained ethical review and approval from the University of Cape Town Faculty of Health Sciences, Human Research Ethics Committee in South Africa and the KEMRI ethics review board (Appendix XVI and XVII). Further, I sought the consent and approval of the Ministry of Medical Services of Kenya and obtained a letter of consent from the Coast Province director of medical services in Kenya. At the time of the first contact with the study hospitals, I clearly explained the study purpose and procedures to the hospital management and obtained verbal consent from the hospital's medical superintendents. I also explained the study purpose and procedures to all participants before conducting interviews, obtaining documents for review or making observations (e.g. attending meetings to observe priority setting practices). Participants were also informed that their participation was voluntary and that they could decline or withdraw from the study at any time without consequences. This was explained in the informed consent forms which were always signed by participants before I conducted any formal interviews. Verbal consent to undertake document reviews and non-participant observations were obtained from the hospital management.

For protection of hospital and individual participants' confidentiality, data collected were anonymized by ensuring that names of hospitals and individual participants were not recorded, rather codes were used. Specifically, in reporting results from the hospitals, codes rather than the actual names of the hospitals are used. Further, a code was developed and used to label the sources of interview quotes that are presented in the results (Table 5. 5). All data that were provided were kept confidential. Where participants were unwilling to be tape recorded, I took notes of their responses. Given that the study was non-experimental it was unlikely to cause any physical harm to participants. It was also explained to the participants that while the study had no direct benefits to them, the results will form a useful basis for potential policy interventions that will improve the way their institutions plan and manage their resources and hence improve their performance in delivering care and meeting the needs of the community they serve.

Table 5. 5: Sample Codes used to anonymize sources for interview quotations

SAMPLE CODE	MEANING OF CODES
Hospital A	One of the case hospitals
Hospital B	One of the case hospitals
HASM01	A senior manager in hospital A
HBML02	A middle level manager in hospital B
HAFL05	A frontline clinician in hospital A

To ensure the safety of the documents used in this study, all original documentation are kept in a secured location at the research site offices and are only available to the researchers concerned with the study.

I however encountered a number of ethical challenges in my work. Some of the information that emerged from the study could potentially have a negative impact on individuals within the hospitals if their identities were to be exposed. Examples include reports about the competence of some senior managers, abuse of office and allegations of corruption (7.3). While I took measures to conceal the identity of concerned individuals as explained previously, it can be argued that the thick descriptions associated with case study research might still make it possible to identify individuals. The same risk of exposing individuals has to be managed when giving feedback of the research findings to the study hospitals. To minimize this risk I plan to give feedback on key areas of potential improvement that are cross-cutting across the hospitals rather than on behaviors of specific individuals or institutions (the latter would implicate individuals). A discussion of these ethical challenges by me and colleagues at the KEMRI-Wellcome Trust Research Programme who are engaged in related research can be accessed on this link https://www.youtube.com/watch?v=eTrGNx5PF0k&feature=youtu.be.

5. 9 STUDY LIMITATIONS

As with any other study, this study has a number of limitations. One of the limitations, consistent with the case study approach, is concerns about statistical generalizability. As indicated in section 5.7, statistical generalizability is not the intention of case study methodology but rather analytical generalizability. Being able to generalize study findings to the population from which a sample is derived (in this case public hospitals in Kenya), is problematic when one is observing and examining a phenomena as highly complex

and context specific as priority setting. Nevertheless, analytic generalization allows for conclusions about relationships (middle-range theories) to be drawn that are transferable to other settings.

Another limitation of the study is that while the evaluative framework was developed from reviews of literature, its' components were not tested empirically in the hospitals. The usefulness of the evaluative framework would be improved by eliciting the views of stakeholders in healthcare priority setting on the suitability of the domains and their relative preference for each. This has been proposed as a further area of study (10.3.2).

The findings and conclusions of the study would have benefited from the views of community members in each of the case study hospitals. While hospital managers and frontline health workers were interviewed and observed, the views of community representatives were not captured because of logistical and resource constraints. It could be argued therefore that *"one side of the story"* is missing in this analysis. The study however set out to understand decision making by hospitals, and in a setting with minimal community involvement (9.2.1). I believe the objectives were adequately addressed even in the absence of community interviews.

Another issue that is perhaps more of a challenge rather than a limitation is that the research was carried out at a time when the health system was transitioning to align itself with the new devolved governance structure (KPMG 2013). In this situation, there were and still are significant changes going on (Appendix XVIII). One could question whether the findings of this study would still be applicable in a more "stable" environment, to the extent that such an environment ever exists. To minimize the effect of the relatively dramatic changes, the study deliberately targeted the examination of "micro-practices" of decision making within the hospital. Such micro-practices, including for example the influence of relationships between actors, and the decision making structures and processes, remain largely unchanged in the transition. Also, in line with analytical generalization, this type of inquiry is not so much about reporting specific observations (such as structures, processes, actors) but rather about how different configurations of these observations interact with and influence the phenomena of interest. Such relationships remain relevant and useful even when specific configurations change.

Another challenge was that during the period of data collection, there were two health worker strikes: a doctors' strike followed by a nurses' strike, with both agitating for improved remuneration and working conditions (Appendix XIX). During this time, it was difficult to secure interviews. Although clinician perceptions about their relationships with hospital administration (an issue that came out in the findings

(8.3) may have been affected during this period, my prolonged engagement within hospitals, and multiple interviews before, during and after the strikes, helped mitigate any extreme distortions.

5. 10 CHAPTER SUMMARY

This chapter has outlined the design and approach adopted in carrying out this study. I adopted a case study approach given its suitability for exploring complex social processes. Two public county hospitals were selected as cases for the study. The chapter also describes the procedures used in collecting data, which includes in-depth interviews, non-participant observations, and document reviews, as well as shares my fieldwork experiences. I also present the conceptual and theoretical frameworks adopted for this study. Specifically, I employed frameworks developed in chapter 3 (3.2 and 3.3) to describe and evaluate priority setting practices in the case study hospitals, while I used CAS theory to explain the study findings. I have also highlighted in this chapter that I adopted a pragmatic interpretive framework for this study, given that the findings are intended to distil policy relevant recommendations. Further, the measures undertaken to ensure rigor of the methods are presented and ethical considerations described. In the next chapter, an overview of the results as well as the analytical choices adopted to interrogate the data is presented.

CHAPTER VI: RESULTS (PART ONE): DESCRIBING PRIORITY SETTING PRACTICES IN COUNTY HOSPITALS IN KENYA

6. 1 INTRODUCTION

In the previous chapter, I described and discussed the methods used to explore the study questions of this thesis. I employed a nested case study design, with two county hospitals as the cases, and 3 priority setting activities in each of the two hospitals as nested cases (5.3.1). In explaining the findings of the thesis, I will employ Complex Adaptive Systems (CAS) Theory (4.2.3). CAS metaphors have found relevance in explaining complex phenomena in healthcare organizations (Begun et al. 2003; Health Foundation 2010) and will be used here to explain the observations of the complex relationships between actors and components within the case study hospitals. To further unpack the hospital system, the framework proposed by Aragon (2010) and adapted by Elloker and colleagues (2012), on organizational capacity is relevant (4.2.3). As discussed in chapter 4, this framework, in addition to considering hardware components of the healthcare organizations such as infrastructure, technology and resources, also recognizes the critical role played by software aspects of the system such as management knowledge and skills and organizational systems and procedures (tangible software), and values and norms, relationships and power (intangible software) (Elloker et al. 2012).

This thesis will have four results chapters. The first (current) results chapter is a descriptive presentation of priority setting practices in the case study hospitals. The second and third results chapters are more explanatory and analytical and employ theory to shape the explanations. The last results chapter is normative and employs a framework developed in chapter three to evaluate priority setting practices in the case hospitals.

In this chapter, I will describe the *what* and the *how* of each of the priority setting activities studied, highlighting the similarities and differences in how these activities were carried out in the hospitals and how this affected the priority setting process. The chapter begins by presenting a brief description of the hospital management structure. This is important given that the subject of study, priority setting practices, is essentially about decision making, which is a function of the management structures in the hospitals.

This is followed by a description of the hospital planning and budgeting process, the hospital medicines allocation process and lastly the hospital nursing allocation process.

6. 2 THE HOSPITAL BUDGETING AND PLANNING PROCESS

The hospital budgeting and planning process is the main priority setting activity in the county hospitals. It is the process that, in theory, identifies and selects hospital priority activities and services, and allocates available resources against those activities. In the county hospitals, it comprises two distinct but, in theory, inter-related activities namely the budgeting process and the annual work plan (AWP) process.

Formally, decision making for priority setting as undertaken by the hospital is highly hierarchical and consists of six main decision making levels namely (Figure 6.1): 1) departmental level 2) the hospital management team level (HMT) 3) the hospital executive expenditure committee level (EEC) 4) the hospital management committee level (HMC) 5) the provincial director of medical services level and (6) the central Ministry of Health (MOH) level. I will first present the formal budgeting and planning process, followed by how these processes played out in practice.

Figure 6. 1: Decision Making Structures in Public Hospitals

6. 2. 1 The Formal Budgeting and Planning Process in Hospitals

The development of the hospital budget and the AWP is designed to be linked and aligned. At the beginning of each government fiscal year (July 1st), hospitals are required to develop and submit AWPs to the central MOH for approval. The AWP is a document that outlines the priorities that the hospital has identified and earmarked for implementation for a particular year, the activities to be undertaken under each of the priorities and the resource requirements for these activities. For example, the hospital identifies and selects a number of disease conditions that are considered a priority, selects interventions to be implemented that target these diseases, sets annual performance targets for these interventions, and identifies resource requirements for their implementation. Hospitals are then required to develop quarterly budgets that outline the allocation of available resources to the plans and priorities indicated in the AWPs. This is based on financing resources received from all sources. The budgets are therefore expected to be linked to the AWPs.

Regarding the budgeting process, hospitals are expected to develop them at the beginning of every quarter and submit to the HMC for review and approval. The HMC is a hospital oversight committee that draws members from the community. The hospital is represented in the HMC by the medical superintendent, who is also its secretary, and the hospital administrative officer. The role of the HMC is to provide oversight of hospital management by members of the community. Its role in the budgeting process is to review and give hospital level approval. Budgets approved by the HMC are then required to be submitted to the regional level (provincial director of medical services' office) who then submits them to the MOH for approval. Submitted budgets are accompanied with requests for authority to incur expenditure (AIE) which is issued by the MOH, through the provincial director of medical services once the budget had been approved. The AIE is a formal written approval by the MOH that gives the hospital authority to access and utilize funds based on approved budgets.

Regarding the AWP process, once again the hospitals are required to develop them and submit to the regional level for onward transmission to the MOH for approval. AWP templates are developed by the MOH and provided to the hospitals. These templates provide guidelines on what information should be included in the AWP and the required format. The key information in the AWP includes 1) hospital priority areas 2) priority interventions associated with priority areas 3) annual performance targets and 4) a service delivery work plan that outlines the specific activities to be undertaken under each priority intervention, the person responsible, the time frames and the costs.

A set of guidelines governs the hospital budgeting and AWP process. For budgeting, guidelines target the allocation of different sources of monetary resources. The funds that are allocated by the MOH, through the hospital management services fund (HMSF) are categorized into development funds and recurrent expenditure funds. Development funds are ring fenced for development activities only, such as construction or rehabilitation of hospital structures, while recurrent funds are earmarked for recurrent expenditures such as electricity and water. Budgeting guidelines for these sources of funds is in the form of specified "vote heads". These represent activities, or areas to which funds could be allocated. These vote head guidelines also govern the allocation of the facility improvement fund (FIF) which is the revenue collected by the hospital from user fees. These guidelines are also enshrined in the MoH AIEs issued after budgets have been approved. The budget can only be approved if it adheres to these guidelines. In addition, the allocation and use of FIF is governed by a cost-sharing policy developed by the MOH.

The MOH also provides guidelines for the development of hospital AWPs. These are in the form of templates and instructions that specify what should be included in the AWP. The AWP templates also provide options from which hospitals are required to select disease priorities. The budgeting and planning guidelines are available in the hospital; however, the cost sharing guidelines are not. All these planning and budgeting guidelines were developed and are enforced by the MOH.

There are no clear guidelines on the roles and terms of the management structures within the hospitals. For example, based on discussions with hospital managers in the case study hospitals and also policy makers at the national level, there seems to be no official management structure for a public hospital. In both case study hospitals, there seems to be confusion over the management organogram. Hospital B for example presented two different organograms in their planning documents while Hospital A did not have one at all. Even though there is no official organogram in the case hospitals, observations and discussions with hospital managers and staff implied the existence of a management structure which was highly hierarchical (Figure 6.2). At the lowest level are frontline healthcare workers and non-health staff, who are answerable to heads of their respective departments. These heads of departments are middle level managers for clinical departments (e.g. pediatrics, obstetrics and gynecology), wards (e.g. adult male, adult female and pediatrics), non-clinical departments (e.g. pharmacy and laboratory) and support departments (e.g. accounts and maintenance) and are answerable to the three senior hospital managers namely the medical superintendent, the hospital administrator and the hospital nursing officer in-charge. The medical superintendent is the chief executive of the hospital and is responsible for the overall running of the hospital. The hospital nursing officer in charge is in charge of the nursing department and hence all

nursing ward in charges. The hospital administrative officer is in charge of all the hospital non-clinical departments. The public hospital is thus seen here to be a complex system with multiple actors and groups of actors whose interactions will be explored in subsequent chapters.

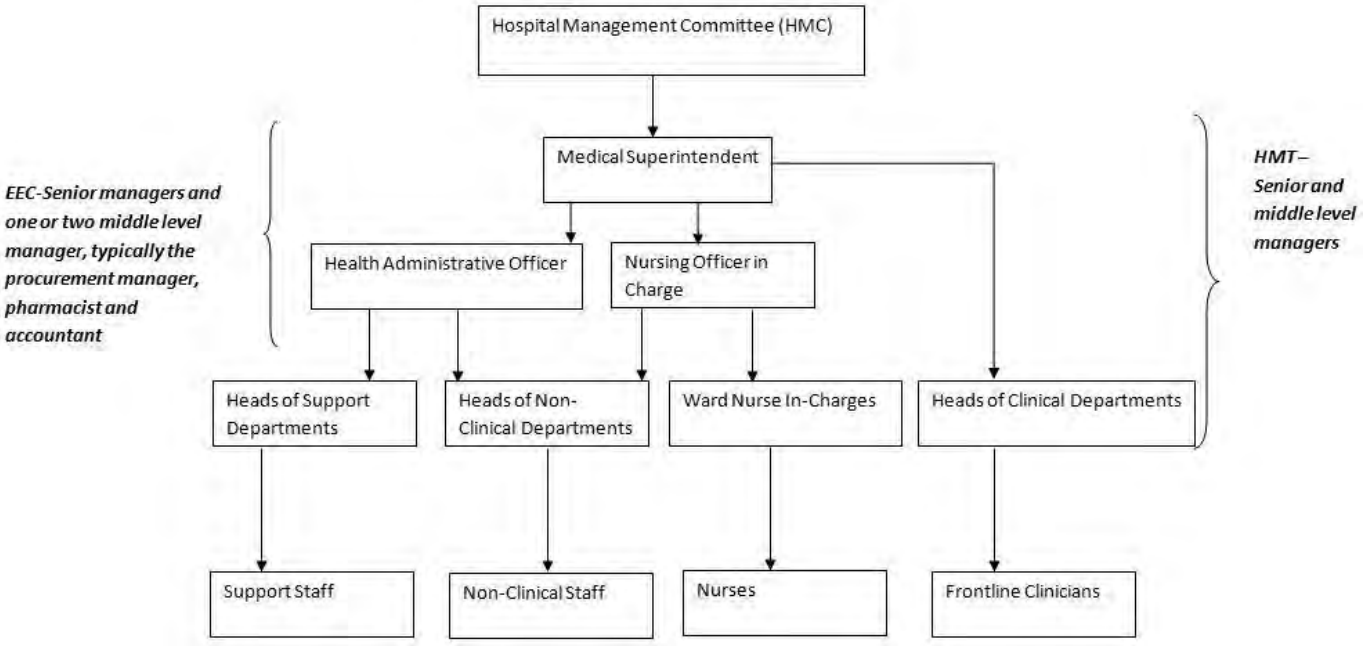


Figure 6. 2: Hospital Organogram

The role of these management structures with regard to the budgeting and the AWP processes is also not clear. For example, the role of the departmental managers in the budgeting and planning for the hospital is not specified in any guideline. Neither are the constitution of the HMT and EEC or their roles in hospital planning and budgeting. In practice therefore, the hospital budgeting and planning process played out differently in both case study hospitals.

6. 2.2 The Hospital Budgeting and Planning in Practice

A number of issues stood out as problematic in the hospital planning and budgeting process in the case study hospitals (Table 6.1), which will be discussed in turn.

Table 6. 1 Key features of the hospital budgeting and planning process in case study hospitals

KEY FEATURES	HOSPITAL A	HOSPITAL B
Alignment of the budgeting and planning process	Hospital budgets and AWPs are not linked or aligned	
Roles of hospital committees	Actual budgeting conducted by the EEC	Actual budgeting conducted by the HMT
Deliberation	Limited deliberation in budget making	Deliberation in budget making
Decision making criteria	Both formal and informal criteria used	

Alignment of the Budgeting and Planning Process

While the budgeting and planning process is expected to be linked and synchronized, in practice, this is not the finding in both case study hospitals. Ideally, it is expected that the AWP process precedes the budgeting process and outlines activities and priorities for the next year. The budgeting process then follows and draws from the AWP to budget for these activities quarterly.

> *HBSM03:"These two processes are supposed to be related. The quarterly budgets are supposed to be based on activities that have been planned for in the AWP. But this is not how it happens"*

In practice, these two activities appear to be separate and unrelated in both case study hospitals. First, they are led by different managers (the medical superintendent and the hospital administrative officer for the budgeting process and the hospital nursing officer in charge for the AWP process) and also attract a different set of actors. While the budgeting process has the prominent participation of senior managers (the EEC), the AWP process is left largely to the middle level managers (HMT) with seemingly little interest from most of the senior managers. As will become clear in the next chapter, this emergent property of the hospital is a result of, amongst other things, the lack of perceived importance and relevance of the AWP process in both case study hospitals (7.4). Second, the AWP is developed almost one quarter into the planning year, while the budgets are always developed on time at the beginning of every quarter. This means that the first budget of the year is often developed without the existence and hence any reference to the AWP. Subsequent budgets are also developed without reference to the AWP. The result is that activities budgeted for in the quarterly budgets are dissimilar to activities planned and budgeted for in the AWP. The general observation was that very few managers know what is contained in the AWP, very few participate in the process, and hardly any care about implementing the AWP. The result is that the AWP is hardly implemented by the hospital. Managers in both case hospitals reported that the AWP is rarely referred to for implementation in the course of the planning year.

HAML11: "They come and tell us that they have been given a deadline by the ministry [MOH]….that the AWP needs to be filled and sent to the province by this date. So people just fill the template very fast but they don't even know what they are putting in the plans. If you ask people 'okay you did the AWP some three months ago do you remember what you did?' Most of the people don't have an idea. They'll tell you 'we did it and it has already been sent to the province. We finished that business'"

HBSL005: "We don't even attend the meetings because they are useless. There are too many delays by the ministry bureaucracy. By the time we are preparing the AWP, one quarter is already gone so how useful can it be?"

A second observation was that there are no clear guidelines on the roles of the different decision making structures in the hospital with regard to the budgeting. This will be discussed next.

Roles of Hospital Committees

In both case hospitals, heads of each hospital department are required to consult with the members of their departments and develop departmental budgets. These are then presented by the departmental heads to the quarterly HMT meeting. In both case study hospitals, the HMT committee is comprised of all departmental heads in the hospital and is chaired by the medical superintendent. However, the roles of the EEC vis-à-vis that of the HMT in the budgeting process differ in the case study hospitals. In Hospital A, departmental budgets are presented in the HMT, but the actual budgeting and allocation of hospital resources to departments and services is carried out by the EEC. The EEC is a smaller, more exclusive committee that is composed of selected (perceived to be senior) heads of departments in the hospital namely the medical superintendent, the nursing officer in charge, the pharmacist in charge, the accountant, the hospital administrative officer and the procurement officer. In Hospital B, the HMT not only receives departmental budgets, but also develops hospital budgets. This means that more actors are involved in the budgeting process in hospital B than in hospital A. This, as we shall see in subsequent chapters, has a significant influence in the priority setting processes in the case study hospitals (8.2). The inclusivity of priority setting processes is closely related to the extent of deliberation, discussed next.

Deliberation and Consultation

The process of presenting departmental budgets is quite different in the case hospitals. In Hospital A, the presentation of departmental budgets appears to be a mere formality and provides limited room for

deliberation. The departmental heads in this hospital submit hand written or typed budgets which are not deliberated upon in the meeting.

> *HAML12: "We don't really discuss the budget, we just write them down and give it to them [senior managers]. I have not seen people discussing anything"*

In Hospital B however, the HMT meetings allow for greater deliberation and discussion. Departmental heads are asked to justify their budgets, which are then discussed by the rest of the members in attendance. The HMT then considers the available funds, vis-à-vis departmental budgets and justifications and develops the hospital budget.

> *HBML009: "We present budgets and people are asked to say why they need the money. At least we get to understand why a departments budget is like this or like that. People also see why for example they are going to get less than what they asked for….because we also discuss what [resources] is available and how much departments can get"*

Decision Making Criteria

In both case study hospitals, criteria used to allocate budgets can be classified into formal and informal. Formal criteria are objective criteria that are used explicitly by hospital decision makers to determine how the hospital budget is allocated across departments and/or services. Informal criteria refer to subjective considerations, which are often implicitly employed, that influence priority setting practices in hospitals. To get an idea of the prominence of criteria used in the case study hospitals, I developed a word cloud by identifying decision making criteria mentioned in interview transcripts and the number of times they were mentioned (Figure 6.3). A word cloud pictorially represents the prominence of words based on how frequently they appear in a text. The larger the font, the more frequently the word appears and vice versa. The criteria identified will be discussed next.

Formal Criteria

In both case study hospitals, the dominant criterion used to allocate budgets to hospital departments and services is the *revenue generating potential* of the departments (Figure 6.3). Departments or services that generated more revenue from user fees collections are prioritized over departments that generate less revenue and subsequently received a larger share of the hospital budget. For example, the maternity and surgical departments are key revenue generators in the hospital. This is because surgeries attract higher user fees than other services offered by the hospital. The maternity department is responsible for the

highest number of surgeries in the form of caesarian sections. The physiotherapy department on the other hand collects very little revenue compared with other departments in the hospital. The maternity and theater departments are therefore always assured of a larger share of the hospital budget, while the physiotherapy department complained of systematic underfunding.

Figure 6. 3: Word Cloud of Criteria used to set priorities in county hospitals

The reason given for using the revenue generating potential of departments as the key determinant of allocations is that the hospitals experienced a severe scarcity of resources and relied on user fee collection to finance their day to day operations. To make sure that the hospital continued to run, resources have to be allocated in a manner that assures further generation of revenues:

> *HASM003: "Before we allocate money to any department, we first consider the amount of revenue they generate…"*

> *HBML13: "The hospital generates very little money which means priorities have to change…. So first we want to make money, we allocate where we can make money……"*

As we shall see in the next chapter, this is an adaptive process of the hospital system that has a significant impact on priority setting processes.

Historical budgeting also features prominently among criteria used by managers to allocate budgets across departments in both hospitals. Departments often receive the same budgetary allocation or increments to previous year's budgets:

HBML07: "We consider what was allocated last year…how much did you allocate pharmacy? KES 500,000 [USD 5882] okay this time lets allocate KES 600,000 [USD 7059].……it's historical"

Managers also consider the extent of necessity of a service in making budgetary allocation decisions. Services are considered essential if the hospital cannot run without them. For example, it is thought that the hospital cannot run without medicines. The pharmacy department is hence always considered a priority. Essential hospital supplies are also considered in this category:

HASM04: "We consider those services which are very essential…these are the ones that if we miss then the hospital will not run. For example if we do not have non-pharmaceutical supplies, this hospital will not run because we know that for you to touch the patient you need to have gloves"

How essential a service is also seems to be related to the public's perception about the service:

HBML14: "Obviously there are some areas that have to get significant allocations for the hospital to be able to run or to be able to be seen to be running….for example how will the public feel if the mortuary were to collapse?"

The perceived medical need in the hospital's catchment area is also a determinant of hospital allocations. The need is however based on the volume of patients seeking different services at the hospital rather than any formally assessed need in the community.

HBML19: "We consider what affects us most in our community, is this type of disease, this type of health problem common here? We base these on our medical records…."

Other formal criteria used include international and national priorities such as the Millennium Development Goals, feasibility of implementing the service, and affordability of proposed services. While these formal criteria are used in both case study hospitals, differences in decision making lay in the use of informal criteria, which will be presented next.

Informal Criteria

Use of Informal Criteria in Hospital A

In Hospital A, a number of informal criteria influence the allocation of resources across the departments. First, managers feel that how vocal departmental heads are, or their lobbying and bargaining ability, has a direct influence on whether or not their department get allocated resources. Managers that are more vocal during meetings and make "a lot of noise" are rewarded with allocations while the departments of managers that are not very vocal are often neglected.

> *HAML09: "You see you can have a head of department who is not very vocal and does not articulate your needs as well as they should….some departments…they seem to always get more than others….it all depends on how eloquent and convincing the head of department presents his proposals"*

Resource allocation is also dependent on interpersonal relationships and mutual benefit between the middle-level managers and the senior managers. Middle level managers that enjoy a good relationship with the senior managers are likely to get better allocation compared to those that do not.

> *HAML10: "Allocations depend on your relationship with the hospital administrators….I mean in life sometimes things work because of relationships right? You are a friend of mine and we get along well so I will allocate something to you"*

Middle level managers at Hospital A also feel that allocations always favor the senior managers who are part of the EEC. They feel that the EEC members always allocate to their own departments more resources, leaving few resources for other departments. The use of these informal criteria is made possible in hospital A because, as pointed out previously, there is little deliberative space in the budgeting process in the hospital. Given that actual allocation decisions are made by a small group of senior managers (EEC), this provides an opportunity for the EEC managers to leverage on their unique position to favor their departments and the departments of those they enjoy good relationships with. This also means that only the "brave" and outspoken middle level managers have a chance to be heard.

The use of Informal Criteria in Hospital B

The situation is different in Hospital B where the middle level managers, through the HMT, are empowered to make allocation decisions. While managers in this hospital also feel that the bargaining and lobbying ability of managers has an influence, the general feeling is that favoritism does not influence

decisions. Each manager is given a chance to justify their requirements and all managers get a chance to contribute to the debate on how the limited resources can be allocated across departments.

> *HBML08: "I can say that there's no favoritism and all that. Everyone presents their needs in the meeting [HMT] and we try to give something to everyone even though it is not enough"*

The result is that while in Hospital A managers generally feel that the allocation decisions are unfair, in Hospital B the feeling is that allocations are relatively fair.

> *HBML14: "We don't get all that we need but I can say that the budgeting is fair. The medical superintendent ensures there is equity. At least each department gets something small"*

A description of the medicine selection process will be presented next.

6. 3 THE MEDICINES SELECTION PROCESS

Another priority setting activity that I examined in the case hospitals was the medicines selection process. In this thesis, medicines selection refers to the decision making process that determines the type and quantities of medicines that will be procured and made available in the hospital. As in the previous section, I will first present the formal medicines selection process in public hospitals followed by a presentation of the process in practice in the case study hospitals.

6. 3.1 The Formal Medicines Selection Process

Hospitals are supposed to obtains medicines from two main sources, the Kenya Medical Supplies Agency (KEMSA), which is a government owned central medicines procurement and supplies agency, and from local private suppliers of medicines. Hospitals are required to procure medicines from KEMSA every two months, using prescribed forms that are provided by KEMSA. There are no official guidelines on the procedure to be used for medicine selection decisions in hospitals. The MOH has however provided two instruments that are supposed to guide the medicine selection process in public hospitals. The first one is the Medicines and Therapeutic Committee (MTC). The MTC is a multidisciplinary committee whose role is to provide guidance on medicine management issues in the hospital. These roles include formulary management, a process whereby decisions are made about which drugs should be made available to the hospital and monitoring the use of medicines in the hospital. The chair of the committee is supposed to be a clinician and the secretary is the hospital pharmacist in charge. The rest of the committee should be

comprised of clinical heads of departments. The MOH provides for the establishment of MTC's in hospitals, and has developed guidelines that outline the establishment and roles of these committees.

The second instrument provided to guide the selection of medicines is the essential medicines list (EML). This is a list of medicines that are considered essential for the provision of healthcare in public hospitals and is thus used as a rationing tool for medicines in the public health sector. Only medicines listed in the EML should be procured by the MOH and made available by KEMSA for distribution to public health facilities. Hospitals medicines selection decisions are therefore restricted by the EML for orders made to KEMSA. The hospital is however not restricted by the EML for medicines it procures from local private medicines suppliers.

6.3.2 The Medicines Selection Process in Practice

In both case hospitals, the selection of medicines to be procured by the hospital is done every two months for medicines to be procured from KEMSA and quarterly for medicines to be procured locally from local private suppliers. Based on views of managers in both hospitals and from document reviews, KEMSA is the main source often comprising about 80% of the total hospital medicine procurement needs in terms of volume. In both hospitals, the pharmacist prepares a list of the medicine needs of the hospital and then places an order to KEMSA for medicines that are available from KEMSA, and forwards another list to the procurement manager for the procurement of medicines (not available from KEMSA) from local private medicine suppliers. Purchase of medicines from local private medicine suppliers is therefore used to supplement KEMSA supplies. Key features of the medicines selection process in the case study hospitals are outlined in table 2 and will be discussed in turn.

Table 6. 2: Features of the medicines selection process in the hospitals

KEY FEATURES	HOSPITAL A	HOSPITAL B
Consultation and deliberation	Limited consultation	Increased consultation
Status of the medicines and therapeutic committee	MTC inactive	MTC active
Existence and use of a medicines formulary	No local medicines formulary	Presence of a local medicines formulary
Medicines selection criteria	Use of both formal and informal criteria	

Consultation and Deliberation

A key feature of the medicine selection process in the case study hospitals is the extent of consultation. Based on observations and views expressed by respondents, it seemed that the medicines selection process in Hospital A was less consultative than in Hospital B.

Consultation and Deliberation for Medicines Selection Decisions in Hospital A

In Hospital A, the pharmacist only consults with some of the managers of clinical departments to determine the medicine needs of their respective departments. The departmental heads prepare lists of medicines needed in their departments and forward it to the pharmacist who in turn uses it to prepare a list of medicines to be procured both from local private medicine suppliers and KEMSA. The consultation of departmental managers is seen as a useful process because it provides an opportunity for the medical needs of the departments to be taken into consideration.

> *HAML16: "I like it when the pharmacist consults; they always ask me 'what do you need? What can I buy for you?' So she always involves me when doing her orders. This happens maybe twice every quarter. At the beginning of every quarter when she needs to order something she always comes to ask what I need."*

This consultation however does not involve all the managers of clinical departments. Managers of some clinical departments complained that they are rarely consulted by the pharmacist in medicines selection decisions. This lack of consultation resulted in the medicine needs of their departments not being factored into medicine selection. These departments often go without essential medicines because of this.

> *HAML12: "We always ask why we [managers] are not consulted when they're ordering drugs. This is why we don't get the drugs that we need at the wards, why we don't have these drugs in the pharmacy. It is because we are not consulted.*"

Front line clinicians in Hospital A also complained that they are never consulted on medicines selection decisions and that this often results in reduced availability of needed medicines in the hospital.

> *HAFL21: "We [clinicians] are never consulted. I've never seen any consultation between pharmacy and the user departments. It's like we wait for them to order then we just try and use whatever they have brought. It affects the departments because for example some of the drugs that are very essential in this department [maternity] are out of stock for so long like 'magnesium*

sulphate' and 'Buscopan'. It's like they are never ordered nowadays in the hospital and yet they are very essential. Now we have to keep telling the mothers to buy them outside the hospital [from private pharmacies]. If we're consulted we'll be able to give the list of the drugs we really require which we feel we cannot do without instead of telling the patients to go and buy. "

Departmental heads and clinicians in Hospital A feel that consultations are necessary between the pharmacy departments and the clinical department. They feel that the lack of consultations results in the pharmacy department stocking non-essential medicines while missing the essential ones. Consultations between the pharmacy department and the clinical department would provide a platform for the departments to request medicines that are essential and help the pharmacy department to order essential medicines.

HAML13: "There is need for the user departments to be consulted because it's like we are just in darkness. It's like the two departments [pharmacy and clinical departments] are there but there is no consultation going on between them. You will find that the [clinical] departments suffer at the end of the day because the pharmacy orders and stocks drugs which are not essential in the hospital. If they consulted us, they would be able to order the essential ones"

Consultation and Deliberations for Medicines Selection Decisions in Hospital B

The situation is however different in Hospital B, where it was reported that the hospital pharmacist regularly consults with departmental managers on medicines selection decisions. The deliberation in Hospital B is enhanced by the fact that the hospital has an active and inclusive MTC, as described in the following section.

The Status of the Medicines and Therapeutic Committee

The contrast in the level of consultation between the two hospitals was perhaps contributed to by the status of the MTC in these hospitals.

The Status of the Medicines and Therapeutic Committee in Hospital A

In Hospital A the MTC is dysfunctional and meets only infrequently. Whereas the MoH guidelines stipulate that the MTC is required to have meetings at least once every quarter, the Hospital A MTC had not met for over a year at the time of this study. The hospital managers do not have knowledge of the role of the committee, and those that are not committee members do not have knowledge of its existence. A number of reasons were given to explain the state of the MTC at Hospital A. First, there is lack of

leadership for the committee. The chairman of the committee is a consultant physician who has since left the hospital to pursue further studies. His position has not been filled and so, given that the responsibility of calling for meetings rests with the chairman of the MTC, no meeting has been held for over a year.

> *HAML07: "It has been hard for the committee [MTC] to meet…you know the chairman is not even there, he left for studies a year ago and we don't have a new chairman"*

Second, the committee at Hospital A is mainly comprised of senior clinicians (consultants). These clinicians often have private practice alongside their public jobs and so hardly have time to take part in hospital administrative/management activities.

> *HASM03:"The problem with the MTC is that most of its members are consultants. [A] is a small town and so the consultants are very busy with their private clinics as well since they are the only ones in [Hospital A]. It is very frustrating because every time I try to organize for meetings, they tell me that they are busy and not available to attend the meetings. This makes it difficult because I cannot have the meetings without the majority of the committee members."*

Third, hospital managers feel that the senior management staff do not support the activities of the MTC. For example, the senior management does not organize for staff cover whenever clinicians were scheduled to attend MTC meetings. This makes it difficult for clinicians to attend meetings because they cannot leave their work stations unattended to attend the meetings. Hospital managers also stated that the hospital administration does not support the meetings by for example providing rooms for the meetings or refreshments as they do for other hospital meetings. This leads the committee members to feel like the administration does not appreciate the importance of the MTC and therefore discourages the committee members from actively participating in committee activities:

> *HAML08: "They [administration] do not care about our [MTC] meetings. They do not give us rooms to meet, and do not even give us refreshments. When I asked for someone else to stand in for me at the clinic so I can attend the meeting, they did not give me someone, so I cannot attend the meetings."*

Fourth, the hospital managers and specifically the MTC committee members do not appreciate the importance of the MTC and are not fully aware of the role of the MTC. This is because most of the committee members have not received any form of training or sensitization on the roles and functions of

the MTC. While the government has a standardized training for MTC's, very few hospital managers have gone through this training. This is made worse by the unavailability of physical copies of the MTC guidelines in the hospital. While the guidelines are available online on the MOH website, hospital staff have limited internet access:

> *HAML16: "If you have a committee and the members of the committee have not been sensitized on the need to have such a committee then the committee will not succeed. People should be aware of the mandate, expectations and the benefits of having such a committee. Also there is need for support from the hospital management. Sometimes you want to have a meeting and you need some logistical issues…. some small things like maybe a soda or a snack or something like that but you don't get it. But I think the biggest factor is the sensitization. The members are not aware of the usefulness of such a forum"*

The Status of the Medicines and Therapeutic Committee in Hospital B

The situation is different in Hospital B. The MTC in this hospital is very active and functional and meets every two months. The committee has very strong leadership from the medical superintendent who is also the chairman of the committee. Based on the meetings that I attended and the minutes of the previous meetings, the medical superintendent is often available and present in MTC meetings. Contrary to the observation in Hospital A, the MTC at Hospital B appears to me to have a healthy mix of senior (consultant) clinicians and junior clinicians. Given that the junior clinicians are more available compared to the senior ones, it is possible for the MTC to get a quorum with adequate representation from clinical departments during meetings. Also the fact that the medical superintendent is also the chairman gives significant administrative support to the committee. The meetings for example are often held in the medical superintendent's office. During MTC meetings, clinicians and departmental heads get a chance to discuss their medicines need and contribute to decisions over what medicines should be stocked by the hospital.

Use of a Medicines Formulary

One of the significant contributions the MTC in Hospital B has made to medicines selection processes in the hospital is the development of a hospital formulary. While in Hospital A, the hospital is guided by the national essential medicines list (EML), in Hospital B there is active discussion about developing a local formulary list that would guide the procurement and use of medicines in the hospital. The MTC has developed a draft formulary and was in the process of revising and finalizing it at the time of this study. While the national EML guides the procurement of medicines from KEMSA, the hospital formulary

would guide the selection and procurement of medicines from local suppliers. It was felt that a local formulary would be more responsive to the local medicine needs of the hospital. In practice however, given that Hospital A has not developed its own medicines formulary list, the hospital pharmacist reported that procurement of medicines from local suppliers is also in part guided by the EML.

Criteria for Medicines Selection

In both hospitals, a range of criteria are used to make decisions about what medicines to procure. One of the criteria used is the revenue generating potential of the medicine. The hospital pharmacists reported that they place high priority on medicines that can be sold to clients and generate revenue for the hospital. They therefore procure medicines that are in high demand in the hospital and medicines for adults. For example, low priority is placed on medicines for children given that public hospitals are not allowed to charge any user fees for the provision of services to children under five:

> *HBSM04: "For me to generate revenue , I have to stock fast moving medicines that I can sell to the users. I therefore mostly order drugs that are required in the private pharmacy. Medicines such as syrups for children are not supposed to be sold to the users and hence do not generate any revenue for the hospital"*

The demand for the medicines, reflected by the disease patterns and prescription trends in the hospitals is also a significant determinant of medicines selection decisions. The pharmacists reported ordering medicines that are of high demand, and that are indicated for the most common diseases in the hospital.
Another criterion that is used by both hospitals is the availability of the medicines with local medicines suppliers. Local availability of selected medicines is considered so as to assure sustainable supply of the medicines. Also the costs/affordability of the medicines is a major criterion, given that the hospitals have resource constraints, and the budgets allocated to the pharmacy for medicines procurement is not sufficient.

> *HBSM04: "First of all it's the cost of the drug, it should fit in our budgets because we have a very small budget, second availability of the drug in the local market so that supply is guaranteed and thirdly the demand for the drug in the hospital because I cannot stock something that will not be used"*

In both hospitals, the pharmacist also reported that they place high priority for medicines required by what they termed "essential departments". It appeared that the term essential departments encapsulates

two key criteria and slightly differs between the two hospitals. The first criterion, which is used in both hospital A and B, is "rule of rescue"; high priority is given to theater and maternity departments because they handle emergencies compared to departments that do not. In Hospital A however, as shall be explored in a subsequent chapter on actor and power dynamics, a second criterion that is used is the perceived influence or power of the managers. High priority is placed on departments that are headed by senior managers who have greater power and authority over the pharmacist. For example the theater department receives special attention because it was headed by the medical superintendent. The pharmacist reported that if she makes sure that these departments had their medicines, she would be "at peace":

> *HASM04: "I give priority to essential departments. I know that at least theater and maternity should not miss the medicines that they require. Those two departments are the ones which can stress me the most. For example, theatre machines run on Isoflurane [anaesthetic], if I miss Isoflurane and the medical superintendent is the one who works there he cannot operate on anyone, so I know that is a very big problem. Then in maternity I know if I miss something like Amoxycillin or IV metronidazole [antibiotics] that will be a major issue for the mothers…..for the other departments the patients can go and buy medicines outside the hospital, they'll survive. If those departments don't have a problem, I am stress free honestly. But once there is just something wrong in that department…there is a problem in the pharmacy"*

The third priority setting activity that I examined in the case study hospitals is the allocation of human resources across departments. This will be presented next.

6. 4 HOSPITAL NURSING ALLOCATION PROCESS

In this thesis, nursing allocation refers to the decision making process for the allocation of nursing staff to the different service delivery departments of the hospital. I will first present the formal nursing allocation process in public hospital followed by what was observed in practice in the case study hospitals.

6. 4.1 The Formal Nursing Allocation process

Public hospitals are provided with nursing staff by the MOH. The MOH interviews and hires nurses centrally and then deploys them to public hospitals in different parts of the country. The MOH is also responsible for the remuneration of nursing staff in all public hospitals. The number of nurses sent to public hospitals by the MOH is determined by the workload of the hospital. This workload formula

considers the hospital bed capacity, admission and outpatient visit numbers as well as guidance from the MOH norms and standards for health service delivery (Ministry of Health 2006). The MOH obtains hospital workload information from hospital reports such as service delivery and utilization reports and human resource reports.

> *HASM03: "Deployment of nurses is based on hospital needs. I send hospital reports every time. For example when we expand our bed capacity we have to report it. I send reports of how many nurses I have, how I have located them and the deficit…the gap that I have."*

While the MOH is responsible for allocation of nurses to hospitals, the hospital is responsible for the allocation of nurses across departments within the hospital. The MOH has in place nursing guidelines that specify the staffing norms and standards that should be used in the allocation of nurses to the various hospital departments. These staffing norms are based on workload considerations. There are no guidelines however on the process of nursing allocation within hospitals.

6. 4.2 The Nursing Allocation in Practice

In addition to the nurses allocated by the MOH, the two case study hospitals also rely significantly on nursing interns and students on attachment to supplement nursing staff shortages.

> *HBSM03: "We are very grateful to schools that send their students here for attachment because they plug the staffing gaps in the hospital. Otherwise the workload would have been just too much for the nurses"*

In both case study hospitals nursing allocations occur in the form of major reshuffles and mini reshuffles. Major reshuffles, where all nursing staff are re-deployed from their current departments to other departments, are carried out in Hospital A every 3 years and in Hospital B every 1 year. Mini reshuffles occur whenever nurses are transferred by the MOH from one hospital to another.

A number of features of the nursing allocation practice in case hospitals are outlined in table 6.3 and will be discussed in turn.

Table 6. 3: Features of the Nursing Allocation Process in the Case Hospitals

KEY FEATURES	HOSPITAL A	HOSPITAL B
Consultation and deliberation	Increased consultation	Limited consultation
Compliance with staffing norms	Staffing norms were not complied with due to resource scarcity	
Nursing allocation criteria	Use of both formal and informal criteria	

Level of Consultation

In both case hospitals, it was reported that the nursing officer in charge is the main actor in the nursing allocation decisions. Other actors in the decision making process are the deputy nursing officer in charge, the nursing officer in charge of the different wards in the clinics, departmental heads of clinics and ward consultants.

> *HAML07: "The main actor is our nursing officer in charge. Also the nursing officer in charge of the clinical areas and ward. But she's the main actor, the nursing officer in charge of the hospital and her deputy"*

> *"The matron [nursing officer in charge] and her deputy just reshuffle. Sometimes she does it on her own without even involving the deputy"*

The level of consultation over allocation decisions varies between the case study hospitals and is always informal. In Hospital A, it was reported that the nursing officer in charge consults with her deputy and the heads of all clinical departments and wards. In Hospital B however, it was reported that the nursing officer in charge consults with only a select group of in charges and excluded the rest of the departmental heads.

> *HBML17: "She does not consult us, maybe just the few nurses around her. For us, you just come to work one day and find a new nurse. Then you are told that there has been a reshuffle. We are not consulted."*

Compliance with Staffing Norms

In both case study hospitals, the numbers allocated to each area do not meet the staffing norms' recommended ratios because of a severe shortage of nurses. While these guidelines are available at the national level, they were not available in both case study hospitals.

> *HASM03: "We also have the nursing council guidelines of workload. For example ICU, HDU, you are supposed to have a ratio of one nurse to one patient. While in the general ward is one nurse to six patients. So the definition of workload has been standardized by the nursing council"*

Criteria used to Allocate Nurses in the Hospital

The same criteria are used in both case study hospitals to determine the number of nurses that are allocated to the clinical areas in the hospital (clinics and wards). The main criterion that was cited by hospital managers is the workload in the ward or clinical area. An area that has a higher workload is allocated more nurses compared to an area with a lower workload. The workload of a clinical area is defined in terms of number of patients that are seen and/or admitted in the clinical area. This is determined by the capacity of the area (for example bed capacity of a ward) and the utilization level of the service offered by the area. Sometimes it is also be determined by the availability of the professionals to offer the service. Workload is also defined by the nursing guidelines developed by the Nursing Council of Kenya.

> *HBSM03: "We used to have a surgeon who used to operate most on male patients. So we used to have a bigger workload in male ward. But when he went for his studies, the workload in the male ward reduced. So the nurses were also reduced"*

The workload is also determined by the nature of tasks routinely performed in the area and the level of effort required to perform the tasks. For example, the general feeling in both hospitals is that the maternity ward and the intensive care unit have a higher workload than other wards because of the nature of tasks carried out in this area.

> *HAML14: "In the maternity unit, the procedures are hard. They are long, they are tedious. Conducting a delivery is not like dressing a wound. It is not like feeding a patient. A delivery is a very long process. It's a long involving procedure. So the maternity workload is high. Also the maternity unit has about five wards in one unit, there is labour ward, antenatal ward, post natal ward, the acute room and the NBU. So maternity has to have more, more nurses"*

HBML12: "In the ICU you may have one patient but because the patient is very critical definitely it requires a lot of work. Then in other places like the pediatric ward, you may have a big number of patients, but most of the children are with their mothers. So the mothers help out with some of the tasks like feeding. This is unlike a ward like the female or male adult wards where you [the nurse] may need to feed the patient yourself"

Another criterion that influences the allocation of nurses across hospital departments is the presence of emergencies. This *rule of rescue* consideration resulted in more nurses allocated to maternity and theater compared to other departments.

HAML18: "The nature of cases admitted in a particular area have an effect on how many nurses are allocated to that department. For example, maternity is a priority area. It is a life and death issue. This is because if they are not attended to properly, there is a chance of losing a mother or the unborn child. So these areas get more nurses"

HASM03: "We handle emergencies at the maternity ward. That's why we have more nurses in maternity compared to all the other units."

The training of nurses also influences their allocation to departments. In both hospitals, an attempt has been made to align nurses training specialization with their assigned departments. For example, nurses who have specialized in pediatrics have been deployed to the pediatric ward and those that have specialized in critical care have been deployed to the intensive care unit.

HBSM03: "Their qualifications and training also influences their allocation to different areas in the hospital. For example if somebody is trained in theatre or in intensive care nursing, definitely I won't put them in maternity; I'll put them in theater or ICU respectively. But the general areas like the general wards I just put any qualified nurse"

HAML18: "If somebody has done psychiatric nursing….that is one of the specializations. Having that nurse in maternity unit is like wasting that person working in other departments. So we prefer them being in the mental unit"

Sometimes the allocations are influenced by special requests and personal preferences of individual nurses. Nurses request to be assigned to a department because they were interested in gaining experience in that specialty.

6. 5 CHAPTER SUMMARY

In this chapter I presented a description of three priority setting activities across the two case study hospitals. The focus of the description has been on the priority setting processes, which include the procedures employed, the decision making structures and the content of the priority setting activities which includes the rules and guidelines in place to govern the priority setting activities and the criteria used to make decisions. In presenting these descriptions, I have endeavored to highlight the similarities and differences across the priority setting activities and between the case study hospitals. One of the features of CAS that has emerged from the description of priority setting process is that the case study hospital are seen to be complex system with multiple actors (and groups) of actors who interact at different levels. Further, the distinction between how priority setting processes are supposed to occur and how they occur in practice is characteristic of the emergent behavior of CAS. These properties of hospital systems as CAS will be explored more deeply in the subsequent result chapters. In the next chapter, I will present results on the influence of contextual issues on priority setting practices in the case study hospitals.

CHAPTER VII: RESULTS (PART TWO): THE INFLUENCE OF HOSPITAL CONTEXT ON PRIORITY SETTING PRACTICES IN COUNTY HOSPITALS IN KENYA

7. 1 INTRODUCTION

In the previous chapter, I presented a description of priority setting in the two case study hospitals, typified by three priority setting tracers. Consistent with CAS theory, the case study hospitals are seen to be complex systems with multiple interacting agents. The emergent behavior of case study hospitals also became visible, represented by the differences between what hospitals ought to do, and what they do in practice. In this chapter, these characteristics and interactions will be explored further by examining the influence of contextual factors on hospital priority setting processes.

In examining priority setting practices in these hospitals, it emerged that a number of contextual factors interact with and influence these processes and outcomes. Priority setting in these hospitals was found to be influenced by the following contextual factors; 1) hospital financing 2) hospital management and leadership and 3) hospital autonomy and decision space. Even though these contextual factors are considered separately, in practice there are significant interactions among them, consistent with CAS. These factors emerged from the iterative analysis process conducted during and after data collection, guided by the descriptive framework developed from the literature review (5.2.1), but also by what emerged from the collected data (5.3.2). In this chapter, I present findings on how these contextual factors interact with priority setting practices in the case study hospitals. The chapter is structured into 5 sections starting with an introduction followed by a section for each of the contextual factors and a conclusion.

7. 2 HOSPITAL FINANCING

The mechanism and level of financing significantly influences how priority setting is conducted in the two case study hospitals. Formally public hospitals in Kenya receive funding from three main sources namely 1) the central MOH, 2) user fees charged to patients and 3) donors. These will be discussed in turn.

7. 2.1 Financing from the Central Ministry of Health

Other than the capital investment by the MOH on infrastructure and equipment, financing from the MOH is in the form of recurrent items which included:

1. Financing of human resources for the hospital; all the technical staff, including healthcare workers and support staff are recruited centrally by the MOH and assigned to the hospitals. The MOH is also directly responsible for payment of their salaries and benefits

2. Financing of essential consumable medical supplies (pharmaceuticals and non-pharmaceuticals)

3. Monetary allocation for recurrent and development activities; the MOH allocates funds to hospitals for recurrent expenditures and additional capital investments through the hospital management services fund (HMSF).

These funds (HMSF), pharmaceutical supplies and human resources are allocated to hospitals according to a formula that takes into consideration the hospital inpatient and outpatient workload, whether or not the hospital is in an area with a high incidence of road traffic accidents, hospital fuel costs and poverty levels (Figure 7.1).

$$A_H = AR\,x\,((PR_w\,x\,PC_r) + (BU_w * BU_r) + (OP_w * OP_r) + (AA_w * Aa_r) + (FC_w * FC_r))$$

Where:

A_H – Allocation to a hospital

AR – Total available resources for allocation to public hospitals

PR_w – Poverty rate weight – 0.2

PC_r – Poverty county count ratio

BU_w – Bed utilization weight – 0.4

BU_r – Bed utilization ratio

OP_w – Outpatient case load weight – 0.2

OP_r – Outpatient case load ratio

AA_w – Accident area weight - 0.05

Aa_r – Accident area ratio

FC_w – Fuel cost weight - 0.15

FC_r – fuel cost ratio

Figure 7. 1: MOH resource allocation formula

Monetary allocations are, on paper, supposed to be disbursed to hospitals' bank accounts quarterly. Hospitals are expected to budget and request for AIE before utilizing these funds. Pharmaceuticals and non-pharmaceutical supplies are to be ordered by hospitals and supplied by KEMSA every two months. On paper, human resources are allocated as and when needed and depended on availability and guided by the MOH staffing norms for health facilities.

7. 2.2 User Fees Charged to Patients

The MOH has also adopted a cost-sharing policy that requires hospitals to charge user fees on services offered to patients. User fee revenues are intended to supplement central MOH financing and are referred to as facility improvement fund (FIF). FIF is collected by hospital cashiers at the points of service and banked in hospital bank accounts and through claims to the national insurer, the National Hospital Insurance Fund (NHIF). Hospitals are then required to make budgets quarterly and submit them to the central MOH for approval. The approval comes in the form of an AIE which is then used to access the funds that have been banked by the hospital.

7. 2.3 Donor Financing

Hospitals also benefit from support by development partners. Donor support is often in kind rather than monetary. Donors, in collaboration with hospitals, identify hospital needs and meet them in kind. For example, if a hospital needs some renovations, the donors hire contractors to do the renovations and then hand over the project to the hospital.

7. 2.4 Hospital Financing in Practice and its Influence on Priority Setting in Case Study Hospitals

Table 7.1 outlines the contributions of the different sources of funding to the case study hospitals resource envelopes for the financial year 2011-2012. This excludes donor funding which is always in kind and difficult to trace.

Table 7. 1: Sources of Hospital Funding for the financial year 2011-2012

FINANCING SOURCE AND DESCRIPTION	HOSPITAL A (%)*	HOSPITAL B (%)*
MOH Financing		
Human Resources	USD 1,232,539 (64%)	USD 1,038,583 (67%)
Pharmaceuticals	USD 101,523 (5%)	USD 76,794 (5%)
Non-pharmaceuticals	USD 68,634 (4%)	USD 51, 916 (3%)
Direct monetary allocations to hospitals	USD 68,530 (4%)	USD 51,875 (3%)
Total MOH resources	**USD 1,471,226 (76%)**	USD **1,219,168 (79%)**
User Fees Revenue		
Out-of-pocket user fees	USD 389,996 (20%)	USD 255,551(16%)
NHIF Claims	USD 70,286 (4%)	USD 77,046 (5%)
Total User Fees Revenues	**USD 460,282 (24%)**	**USD 332,597 (21%)**
Total Hospital resources	**USD 1,931,508**	**USD 1,551,763**

*As percentage of total hospital resources

One of the findings, based on document reviews and also on views of hospital managers, is that the MOH is the major source of financing for both case study hospitals.

> *HASM04: "If you look at our total resources, I would say the MOH contributes significantly because they are the ones who pay the human resource, who pay the workers and they are the ones also who send us drugs and non-pharmaceutical and occasionally some equipment. I would say the government still plays a very significant role in funding this hospital"*

> *HBSM03: "The MOH and user fees. The MOH supplies us with drugs and non-pharmaceuticals and also sends us staff and pays their salaries"*

Funding from the MOH is however mostly in the form of human resources and essential medical supplies with only a small proportion in the form of direct monetary allocations (Table 7.1). In both hospitals therefore, user fees account for a higher proportion of cash budgets.

HASM04: "I would say FIF accounts for about 70% of our total monetary resources. The Ministry of health I can say maybe 30%. For example last quarter we collected [KES] 9 million [USD 105,882] from user fees while the ministry [of health] sent us only [KES] 1.7 million [USD 20,000]"

HBML08: "If you compare what we collect per quarter and what we receive from GOK [ministry of health] per quarter, you will see that in this hospital we get most of our funds from FIF. For example we normally get around [KES] 1.5 million [USD 17,647] from GOK every quarter while in the same period we collect about [KES] 6 Million [USD 70,588] from cost sharing, so you can see FIF is almost 75 percent of our monetary resources"

This is also evident from hospital budgets and accounting records. For example, in the year 2011-2012, user fee revenues accounted for 89 % and 87 % of the total cash budgets of Hospital A and B respectively (Figure 7.2).

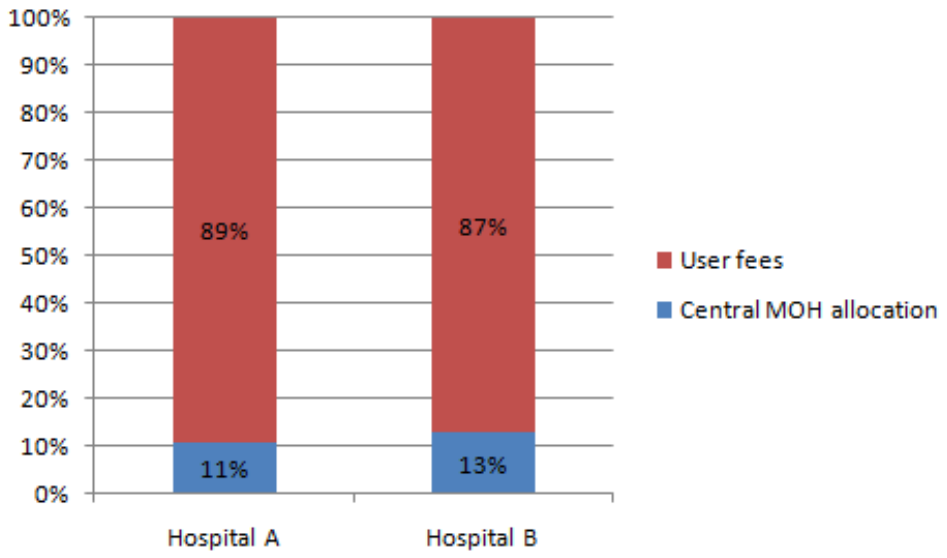


Figure 7. 2: Sources of cash resources for case study hospitals

Another major finding was the fact that both hospitals are severely underfunded. Managers in both case study hospitals complained that their hospitals are operating under severe resource constraints.

HASMO3: "Resources are a challenge to us. If you look at the money we collect and look at the budget requests you will see that we have huge gaps, almost 50%. It is a challenge for us to pay for services, to buy drugs and non-pharmaceuticals and to pay casual workers. We are always in financial problems"

HBML09:"The hospital does not have sufficient resources. The ministry gives us very little funds and the collections from user fees are also not enough because the people are poor. So it is very difficult to run the hospital"

It is also evident from planning and budgeting documents and from observations of budgeting meetings that there are significant gaps between budget requests and projections of resource needs and the resources available to both hospitals. For example the financial year 2011 -2012, hospital A had a resource gap (the difference between the annual budgets and the resources that were available to the hospitals) of 45% while hospital B had a gap of 54% (Table 7. 2).

Table 7. 2: Hospital's Financial Resources, Budget Needs and Debts for the Financial Year 2011-2012

	HOSPITAL A (AS % OF AVAILABLE FUNDS)	**HOSPITAL B (AS % OF AVAILABLE FUNDS)**
Total Available Funds	USD 528,862	USD 384,472
Budget needs	USD 767,399	USD 592,095
Resource gap	USD 238,537 (45%)	USD 207623 (54%)
Total Debts	USD 207,137 (39%)	USD 159,138 (41%)

Other than scarcity of monetary resources, both case study hospitals also experience severe scarcity of essential (pharmaceutical and non-pharmaceutical) supplies and human resources. The scarcity of essential supplies is attributed to inadequate supplies by KEMSA and limited financial resources at the hospital level to procure supplies from local private supplies. While there is a general scarcity of human resources in the hospitals, the situation is worse for nursing staff. The shortage is caused by the fact that the MOH had deployed an insufficient number of nurses to the hospitals and also because there is a high turnover of nurses in the hospitals.

HAFP17: "We have not had drugs in the hospital for some time now. Last week we had a meeting with the pharmacist to raise our concerns. She said that they had ordered for drugs from KEMSA but they got less than 40% of what they ordered"

HBSMO3: "The nursing shortage is a serious issue. I cannot even give my nurses leave or day offs because they are so few. And also they have to work very few in a ward. If you go to the ward you will find one nurse in a shift covering a whole ward with 50 patients"

Another key observation is that MOH financing is unreliable and unpredictable. For example, while the hospitals are expected to receive quarterly disbursements of funds for recurrent and development expenditure (HMSF) from the MOH, both hospitals often have to wait for as long as 2-3 months before receiving the funds.

> *HASM05: "Usually, the allocation is done quarterly, but usually it's very late. You can get an AIE but there are no funds in the account. So we cannot depend on the ministry [of health] allocation. Like now [July] we are supposed to get the first quarter allocation but we will probably get it in September when the quarter is almost ending"*

> *HBSM03: "For example now we are in the third quarter of the year, and the first month of the quarter is ending and yet we have not received any communications from the headquarters about what we have been allocated for this quarter. So maybe we will receive the AIE in the second month of the quarter, then the money in the last month"*

The situation is the same with the distribution of pharmaceutical and non-pharmaceutical supplies by KEMSA. Again, this means that both case study hospitals go for long periods of time without adequate quantities of essential medical supplies.

> *HAML06: "We order drugs and KEMSA is supposed to deliver them to us every 2 months, but we don't get them. Sometimes we get them three months after we order"*

> *HBML09: "There is a problem with the supply chain. KEMSA never delivers on time, so we have to buy drugs locally to keep the hospital running"*

The influence that the financing of case study hospitals have on priority setting practices is consistent with the dynamics of CAS. The case study hospitals are seen to be complex systems nested within larger systems, notably the public health sector on the one hand and the local community on the other. The larger systems are seen to interact with the hospital systems, presenting conditions that lead to self-organization. For example, one of the conditions that the case study hospitals face as a result of financing arrangements is the over-reliance on user fees:

> *HASM01: "FIF is very important, because if FIF is stopped today the hospital will shut down. This is because even though the government gives us some drugs and some non-pharmaceuticals,*

we still have to use cost sharing money to buy most of them. Even the food for patients is bought using cost sharing money….. Water bills, electricity bills are all paid with cost sharing money"

Hospitals over-rely on user fees because the financing arrangements are such that a significant proportion of their major source of financing (the central MOH) is in kind (human resource and essential supplies) with the implication that they have little flexibility on this form of financing. Further, the delays experienced with all forms of MOH financing due to slow bureaucratic processes means that they have to rely more on user fees collected locally since it is readily accessible. For hospitals to self –organize so as to adapt to this situation, they have to look for ways of maximizing their user fee revenues. An emergent behavior of both case study hospitals is the use of revenue generating potential of departments and services as the main priority setting criteria. As described in the previous chapter, in both hospitals managers expressed preference for departments that generate more user fees and hence allocate more resources to them compared to departments that generated less user fee revenue. As CAS therefore, the hospitals have self-organized in the face of environmental pressures into "revenue-maximizers".

Consistent with observations of CAS, this emergent behavior of revenue maximization is not as a result of one but rather multiple interacting factors. In addition to over-reliance on user fees, the severe resource scarcity that hospitals faced also means that they have to self-organize to remain operational. This resource scarcity is attributed to factors in both systems that the hospitals are nested in; underfunding and funding disbursement delays by the MOH (public health system) and poverty in the catchment areas of the hospitals that result in poor revenue collections from user fees. In the face of severe resource scarcity, managers, who are agents in the hospital system, have an incentive to favor departments that generate more revenues in their budget allocations. While hospital managers justified this behavior as necessary for the hospital survival, the use of revenue maximization seems to result in undesirable consequences. These non-linear consequences are again consistent with CAS where the metaphor of the "butterfly effect" is commonly used. Typically in CAS, seemingly small changes in some parts of the system can dramatically affect the long-term behavior of that system (Begun et al. 2003). For example, the use of revenue generation as a criterion often also leads to decisions that are inequitable and against intended government objectives to increase access to services to special interest population groups. For example, the MOH, in an endeavor to increase access to treatment to children under five has made services to this population group free in all public health facilities in Kenya. However this policy has resulted in unintended and unpredicted consequences, where pediatric departments are perceived as low income generators and hence receive little priority. This is an example of a sub-systems non-linear response to changes or conditions imposed by the larger system in which it is embedded.

HASM04 "Since I am allocated a small budget I only procure medicines that I can sale, I cannot buy medicines for children under 5 years because they don't pay for services"

HAML08 "Departments like rehabilitation, physiotherapy hardly get allocations……but most of these patients are disabled and do not complain…"

The unintended effects of policies that require public hospitals to rely on user fee revenues have been documented in other settings (Harding & Preker 2000). These are usually linked to hospital reform initiatives that seek to reduce the financial dependence of hospitals on central government budgets (Harding & Preker 2000). It has been observed that such policies introduce inequities in the public hospital sector mainly by incentivizing hospitals to increase user fee rates beyond the reach of the poor (Harding & Preker 2000). This has for example been observed in Indonesia, China and Vietnam (World Bank 2011). The observation in the case study hospitals where resources are allocated in a manner that denies some segments of the population access to services highlights another important mechanism by which such policies promote inequities.

Further, given that this preference for high revenue generating departments is operationalized by senior managers in the hospitals, who are agents in the complex system that is the hospital, it has led to perceptions of unfairness in the allocation of resources in the hospitals.

HAML13 "It is not fair, it is not fair at all. I think they should at least allocate some money to me (physiotherapy department) like the other departments…."

Perceptions of unfairness in the allocation of resources, coupled with severe resource scarcity resulted in reduced staff motivation. In both hospitals, managers are less enthusiastic about participating in planning and budgeting meetings and often skip them. They attributed this to the fact that, among others, they are unlikely to get any allocations even if they attended planning and budgeting meetings.

HAML11: "I don't attend the meetings (HMT)...I don't even submit my department's budget…the meetings are useless and I don't get allocated any money"

HBML09: "At first I used to attend those meetings [budgeting meetings] but then all the time it is the story…no money no money…so I don't attend them anymore because it does not make any difference"

Frontline clinicians are especially frustrated because they are ill-equipped to provide care to patients because of lack of essential supplies and nursing staff. This lack of resources has compromised the quality of care provided to patients.

HBFL13: "Sometimes we have to do operations, but when the patients go to the wards, the wounds get infected, because there is no gauze for dressing or there aren't sufficient gloves so the patients have to buy gloves for their own"

HAML22: "The shortage of nurses compromises the quality of care given to patients. For example in my ward sometimes we have over 60 patients and yet you have only two nurses on duty, sometimes only one. Yet in ideal situation in medical wards you are supposed to have six patients per nurse. And you can imagine 60 patients per nurse. Now do you expect any quality there? So nurses prioritize tasks and attend only to life threatening cases and leave the other cases unattended"

Access to resources at the workplace has been shown to increase motivation of staff in other settings (Willis-Shattuck et al. 2008; Henderson & Tulloch 2008). For example in a study from Mali, it was reported that lack of material resources such as essential supplies was an important factor for demotivation among health workers (Dieleman et al. 2006).

Another emergent behavior in both hospitals in response to the condition of resource scarcity is the use of historical allocations as one of the priority setting criteria. Managers in both hospitals feel that the severe scarcity of resources makes it very difficult to objectively determine the relative allocation of resources to departments given that resources are scarce.

HAML06: "What criteria? We use no criteria; the money available is so small that we just ask 'what did you get last time? Ok we will give you the same this time'"

HASM01: "How can you set priorities when there are no resources? We just give departments what we gave them last time, or add a bit more"

Severe and perpetual resource scarcity has also led to the hospitals' priority setting and resource allocation activities focusing on short term operational issues and neglecting longer term strategic planning. For example, despite the fact that both hospitals have developed 5 year strategic plans and AWPs, managers reported that these exercises are not taken seriously by the hospital, are hardly implemented and hence are of little significance to the hospital. Managers in both hospitals reported that it was unlikely that plans would be taken seriously when there were no resources to implement them. In both hospitals, there is more focus on meeting ad hoc needs that arise on a day to day basis.

> *HAML21: "It is management by putting off fires. Everyday there is a crisis that we have to sort out. Today there is no electricity, tomorrow the ambulance has broken down, such things"*

> *MBML09: "We try to plan but mostly we just try to keep the hospital running by dealing with the problems that we face day to day. When something happens, you will see people running around trying to resolve it"*

Other than hospital financing, it is evident in both case study hospitals that the state of management and leadership also influences priority setting. This will be presented in the next section.

7. 3 MANAGEMENT AND LEADERSHIP IN THE HOSPITAL

Another factor that seems to interact and influence priority setting practices in hospitals is the state of leadership and management coalescing around a number of key features now explored (7.3).

Table 7. 3: Case hospital leadership and management characteristics

MANAGEMENT AND LEADERSHIP FEATURES	HOSPITAL A	HOSPITAL B
Technical skills in budgeting and planning	Managers lack formal training in management and leadership and have no planning and budgeting technical skills	
Leadership vision	Hospitals have a mission and vision on paper, but do not take them into consideration in practice. Hospital leadership does not champion a vision for the hospital	
Monitoring and evaluation	Hospital leadership does not monitor and evaluate performance of hospital and staff against stated goals	
Availability and leadership presence	Leadership presence is not felt in the hospital. The medical superintendent is always busy and unavailable for management	Leadership presence is felt in the hospital. The medical superintendent is available for management responsibilities.

MANAGEMENT AND LEADERSHIP FEATURES	HOSPITAL A	HOSPITAL B
	responsibilities.	
Leadership interest in management responsibilities	The medical superintendent is not interested in management and leadership roles, and prefers clinical roles	The medical superintendent appears interested in management and leadership roles
Managing interests and relations	The role of the medical superintend as an arbiter of conflicting interests and power relations is lacking	The medical superintendent is seen as a "peacemaker". She plays the role of managing relations and interests

Leadership Technical Skills in Budgeting and Planning

One of the findings on the leadership and management situation in both hospitals is the general limited technical capacity of hospital managers for planning and budgeting.

> *HASM03: "Most of the hospital management committee members do not have the training and skills in budgeting and planning. This makes the process of making the hospital annual work plan and budgets very difficult since they cannot even come up with simple budgets and plans for their departments.*"

> *HBML06: "One of the reasons why I don't think the HMT has the capacity for decision making is because we don't have appropriate levels of education amongst the members. I also think that we also don't have enough experience"*

This is attributed to a number of issues. First, the hospital management is comprised of senior and middle level managers who have received technical training in their profession but not management training.

> *HASM01: "I had to learn on the job, we did not receive any management training in medical school. So when I first got here, I was clueless about management issues. It's like you are just thrown to the deep end and expected to swim"*

> *HBSM01: "One day you are a dentist, the next day you are medical superintendent in charge of a big hospital. That is how it happens. You are sent here [the hospital] without any [management] training. All you have is your clinical training"*

In recognition of the gaps in management and leadership competencies among hospital managers, the MOH and a number of development partners have developed in-service leadership and management short

courses. However, in both hospitals, only a select few senior managers have attended these courses, with most of the middle level managers remaining untrained.

> *HAML17: "Not all the HMT members have been taken for the training. I think there are four key members who were taken. That is the medical superintendent, the hospital administrative officer, the matron and the Human resource officer"*

> *HBSM03: "We don't look at the qualifications, it's just who is head of department at that particular time, he is the one who comes to the HMT. Definitely there is need for further training and I think most of the HMT apart from me, the nursing officer the HAO and the pharmacist have not been trained in management. It makes it hard for people to understand how to budget and plan. So we sit arguing the whole morning and the whole day"*

This means that the majority of hospital managers, most of them middle level managers, have not received any form of management training. The lack of technical competency for budgeting and planning activities makes it difficult for the hospital to develop budgets and AWPs. Senior managers (who happened to have received training in these processes) complained that the rest of the managers (the middle level managers) lacked an appreciation of the need to ration health care.

> *HASMO1: "The managers do not have budgeting and planning skills…..it affects the budgeting process because they don't appreciate the process of budgeting and keep presenting unrealistic requests and do not understand why they can't always get what they ask for. Yet we don't have that money "*

> *HBSM01: "Most of them don't have the training or they don't have the knowledge required to carry our management roles. So conducting budgeting or planning with some of them is very difficult. They cannot develop realistic budgets or plans"*

Failure to appreciate the need for rationing manifests itself in lengthy and inconclusive budgeting and planning meetings. It is also thought to result in the presentation of budgets that are out of touch with the reality of resource scarcity in the hospital, and non-alignment of budgets and plans. This lack of appreciation of the need to ration resources is also likely to contribute to the feeling of unfairness among hospital managers, which alongside other factors like resource scarcity, described in the previous section, has led to the emergent property of lack of motivation and what is referred to severally by respondents as

a "government culture" among hospital managers in the hospital system. The term "government culture" is used to refer to a situation where people seem to lack a sense of commitment to (or seem not to care about) what they are expected to do and hence rarely take action or initiative to carry out any activities. I observed that hospital staffs are generally lethargic towards their duties, and about priority setting activities such a budgeting and planning meetings. Staff often show up late at work, and spend a significant amount of time doing non-work related activities such as social chats in their offices, reading newspapers and having teas.

> *HMML12: "It's the government way…. Paper work paper work paper work but nothing is done…"*

> *HPSM04: "In government nobody is serious about their work, people just show up to be seen but do not really care whether work is done or not"*

The lack of technical competence in budgeting and planning also contributes to another emergent property of the hospitals, the use of historical budgeting and informal considerations in the allocation of hospital resources (6.2.2). This is because the managers lack the skills and awareness of alternative budgeting methods.

> *HASM04: "How can we use criteria to budget when they don't even know that they should be doing that? The only thing they know is last year's budget. That and noise making. We just argue all day"*

> *HBSM04: "The only thing they know how to do is to argue and to play politics. But if you tell them okay let's as use proper budgeting procedures you find that they have no skills for that"*

Leadership Role in Fostering a Vision for the Hospital

It has also been observed in other settings that one of the important roles of leadership in priority setting processes in hospitals is the provision of a sense of direction for the hospital (Reeleder et al. 2006). In both case study hospitals, it was observed that the leadership does not champion a vision that the hospital should endeavor to achieve. One of the reasons advanced for this is that while the hospital has a mission and vision, these are merely adapted from the central MOH and hence lack a local focus and hospital ownership. Indeed it was evident in both hospitals that the vision and mission are clearly and boldly written on the administration block walls, but the managers and the staff are not familiar with them.

HAML05: "Here we don't have leaders, we have managers…because a leader is somebody who has a vision for the hospital…….but here do you see anybody with a vision for the hospital? No. On the walls we have just the MOH mission and vision"

HBML08: "I don't think there is any particular direction that the hospital is headed or aspires to. Here we just work like we are on auto pilot. As long as the hospital is running the managers are happy. I have never seen them [management] telling us 'this is where we need to go, this is our vision'. What you see there is the ministry of health's vision, not ours"

The absence of a vision that is locally owned and embraced by staff likely contributed to the general observation that hospitals tend to focus on short term operational issues and neglected to invest in long term strategic planning.

HASM06: "There is nothing like a vision. This is why we don't even improve as a hospital. Because we just do the day to day things to run the hospital. But I cannot say that the hospital is improving or progressing"

HBML11: "A vision will help the hospital to progress. People would be working to achieve something and to better the hospital. But here we just come in and work without direction"

Leadership Role in Monitoring and Evaluation

Another characteristic that has been considered an important function of leadership that is lacking in both case study hospitals is monitoring and evaluation. Managers reported that there is no mechanism to monitor and evaluate whether the budgets or the AWP have been implemented as intended. So while the hospitals have plans and budgets, information about progress in their implementation or evaluation of the success of previous plans is lacking.

HAML11: "One of the problems we have is that we do not monitor and evaluate what we do. You will see that people will just prepare the budgets and AWP and forget about them, no one follows up to see if they have been implemented"

HBML07: "There is no such thing as monitoring and evaluation in this hospital. We just submit our plans to them [ministry of health]. But we don't hear anything from them [ministry of health].

And the managers here don't follow up on them either. So you will find that people are not really serious about the plans"

A number of reasons are likely to have contributed to the lack of a monitoring and evaluation mechanism. First, monitoring and evaluation is assumed to be a central MOH role. Local managers therefore do not feel that it is within their mandate to monitor implementation of hospital plans. They feel that their role is restricted to submitting reports to MOH and that the MOH has failed in their responsibility to follow up. Second, characteristic of the "government culture", managers are generally not motivated to carry out managerial duties. Third, it is also the case that hospitals are constrained for resources and hence perhaps do not consider the monitoring and evaluation function high up in their agenda.

The lack of monitoring and evaluation mechanisms for hospital priority setting activities is thought to be one of the reasons the hospital managers and staff lack a sense of "doing the right thing". Managers, who are agents in the hospital system adapted to the state of weakened accountability mechanisms by adopting a "government culture".

HAFL19: "If there was a way to monitor whether we are implementing the plans, maybe you will see people being serious about it. But there is none. So this is one of the reasons that the plans we make don't get implemented"

HBML13: "Every year we make plans but we don't look to see last year's plans were implemented. Because there is no follow up, no one bothers to even implement. I think this is one of the reasons most of these activities are useless. It is just paperwork"

<u>The Influence of the Leadership Characteristics of the Medical Superintendent</u>

One of the striking differences in leadership and management between the two hospitals is the role of the medical superintendent. Based on observations and backed by views of other managers, the medical superintendent in Hospital B is more motivated and committed to her leadership and management roles compared to the medical superintendent in hospital A.

Hospital A

The medical superintendent in hospital A is often unavailable to attend to his administrative responsibilities. Other hospital managers complained that the medical superintendent is often very busy and that they find it very difficult to see him when they have an issue that needs his attention.

HAML05: "He doesn't have that time for management. Mostly he concentrates on what he likes, being a surgeon. I think the right person to be a medical superintendent is either a pediatrician or a gynecologist because they have time, they have time."

These sentiments were also validated by my observations spending time in the hospital. I observed that the budgeting and AWP meetings have to be organized by the hospital administrative officer and nursing officer in charge respectively in the absence of the medical superintendent. On the day of the budgeting or AWP development meetings, the meetings often start without the medical superintendent who would come when the meetings are in progress or almost about to end. Because of his absence, these meetings are chaired by the hospital administrative officer or the hospital nursing officer in charge even though on paper the meetings are supposed to be chaired by the medical superintendent. One of the reasons advanced for the unavailability of the hospital superintendent is that he dedicates most of his time to his clinical duties within the hospital and in private practice and neglects his managerial and leadership duties. The hospital superintendent is the only surgeon in the hospital and the entire district. Even though he had been appointed as a medical superintendent, with extensive leadership and management responsibilities, he has not been relieved of his clinical responsibilities and is still expected to run the surgical clinic and attend to all theater cases. This means that the medical superintendent has to split his time between management and clinical responsibilities.

HAML07: "He is very busy with the theater. You see there are two important days for the surgeon. The first day is the clinic days to filter the patients and schedule operations. Then there is the day for the scheduled operations. The medical superintendent is busy on those two days and cannot attend to any management issues. Then the other days of the week he has to review the patients he has operated on. He has to spend time doing ward rounds in the hospital reviewing his patients. So he does not have time for administrative issues"

HAML12: "You know he is the only surgeon in the district….if he is not working here (hospital A) he is working at [a private hospital in town A]…he is very busy"

Respondents also felt that, while the medical superintendent has to share his time between clinical and administrative responsibilities, he seems to prefer his clinical responsibilities more and hence dedicates most of his time attending to surgery at the expense of his management and leadership responsibilities.

HAML015: I think the medical superintendent likes his theater work more than administration. If you talk to him about theater you can see that he is interested. But it is very difficult to find him to sort out administrative issues. I think he is not interested in that"

Informal discussions with some hospital managers revealed that the medical superintendent is perhaps not interested in a management position at all. It was indicated that he expressed unwillingness to take up the hospital management position when it was given to him and was keener in developing his clinical career by acquiring more specialist training. However, there is no provision within the MOH to turn down an offer for a management position. One has to become a hospital manager if assigned this responsibility by the central MOH.

HBSM01: "In government you don't choose to be a manager. You just wake up and you are told that you are now the medical superintendent of this or that hospital. You don't ask for it. They don't care whether you want it or not"

Hospital B

The situation was quite different in Hospital B. Here the medical superintendent's presence is felt in the hospital.

HAML05: "We have a good medical superintendent. She is very dedicated. And she is also very helpful. She is always around to attend to issues and also for us to talk to her if we have a problem in our departments"

HBML016: "She is really dedicated to her work. If you go to the office now you will find her there. And she is always following up on issues and trying to sort them out"

I observed that she is always in her office holding meetings with other managers and attending to administrative issues. She was very accessible to me due to her presence in the hospital and her interest to discuss hospital administration issues and takes an active role in them. For example, other than the budgeting and planning activities which she actively leads, she also chairs the MTC and organizes the committee meetings in her office. She also holds monthly meetings in her office with nurses for the allocation of food and food supplements to the different wards. She seems to be in touch with resource allocation issues and offered explanations of why activities such as food allocations were important in the hospital.

HBSM01: "In this hospital food takes up a lot of our resources…especially the mental ward, those patients consume more food than other patients, so we have to sit every month and carefully allocate food to all the wards"

Her availability to carry out her management and leadership responsibilities is aided by the fact that she does not have a heavy clinical work burden. Given that the hospital has three other dentists, she has been relieved of her clinical responsibilities and focuses fully on the management and leadership responsibilities.

HBSM05: "We have enough dentists so most of the time she is in the office. If you need anything to be sorted you will always find her in the hospital. So she has enough time to run the hospital"

The difference in leadership between the two case study hospitals perhaps best depicts how the disposition and actions of an agent in a system can have far reaching effects on other agents and influence system dynamics. It has been observed in other settings that a key leadership role in healthcare organizations is that of managing relations between other actors or agents and balancing power differences between them (Reeleder et al. 2006). The unavailability of the medical superintendent in Hospital A means that there is no one to manage the relationships and often varying interests of the different managers. As will become clear in the next chapter, this resulted in heightened power differences between the managers that has led a number of managers to feel that there is unfairness in priority setting processes. Further, in hospital A, there is a leadership vacuum at the top which has unofficially been filled by the hospital administrator and the hospital accountant; often, these two are the ones to attend to administrative issues that arise, make decisions and seek the official approval of the medical superintendent. Hospital managers feel that the hospital administrator and the accountant have colluded to usurp the powers of the medical superintendent and use them to further their own interest. This has led to feelings of unfairness and a sense of distrust among the managers.

HAML13: "So the two of them have to be as a team, they basically back an idea about what they need and the med sup doesn't interfere…..I think he is just overwhelmed….he is a very busy person…so it's kind of he is overpowered by those two"

HBML05: "He is never there, so those two take over. And I told you about them, they only favor their departments and their friends. And since the medical superintendent is not there, nothing can be done about it. So most of us feel that especially the budgeting process is unfair"

It was also claimed that the leadership vacuum provides an opportunity for corruption. Managers reported that there have been cases of misappropriation of funds by some senior managers, which have gone undetected and unpunished because the medical superintendent is not "in charge".

> *HAML05: "But so like the incident where money for renovating the mortuary disappeared. It came up very clearly that even the medical superintendent was not aware of what happened. People wondered why he had not taken action. But he does not have time to notice such things or take action. I think he has too much on his mind so he ends up…it has happened"*

Compared to Hospital A, the presence and availability of the medical superintendent in Hospital B has contributed to a sense of fairness in the priority setting process. Managers reported that the medical superintendent is always at the budgeting and planning meetings and tried to ensure that every department gets some allocation.

> *HBML24: "She is a very nice medical superintendent. If it were someone else there would have been a problem but with her she makes sure, every department. Okay she, she makes sure that equity prevails. At least she makes sure everyone gets something"*

> *HBML15: "The thing about the Medical superintend is that she is very fair. She always calls us to get our input. She always sends me an SMS telling me "come for the meeting". So she tries to be fair and also transparent. That is how she is. I have worked in a lot of hospitals and I can tell you it is not always like that. I think it depends a lot on the individual"*

Linked to management and leadership, it was evident in both case study hospitals that the range of decisions that hospital managers are allowed to make (decision space), and that they exercise, affects priority setting practices. These findings are presented in the next section.

7. 4 HOSPITAL AUTONOMY AND DECISION SPACE

The decision space experienced by the hospital is another contextual factor that interacts with priority setting in the case study hospitals. Bossert (1998) has defined decision space as the range of effective choices that organizations are allowed to make by central authorities. Usually defined by laws and regulations, decision space defines the specific rules that determine the decisions that managers can or cannot make in their organizations (Bossert 1998; Bossert & Beauvais 2002). Further, Harding and Preker (2000) have suggested a framework for mapping the levels of hospital autonomy into four main

categories namely: 1) budgetary unit, 2) autonomized organizations, 3) corporatized organizations and 4) privatized organizations. Under budgetary units, hospitals are run as departments of either the central or local government (Harding & Preker 2000; World Bank 2011). The hospitals strategic issues and most day-to-day decisions are determined by the government's hierarchy of officials and rules. Revenues are determined through a direct budget allocation by the central or local government. Under Autonomization, the day-to-day decision-making control is shifted to hospital management (Harding & Preker 2000; World Bank 2011). These changes are typically accompanied by increasing the scope for generating and retaining revenue in the hospital. With corporatized organizations, managerial autonomy is stronger than under autonomization, giving managers significant control over all inputs and issues related to production of services (Harding & Preker 2000; World Bank 2011). The organization is legally established as an independent entity and hence the transfer of control is more durable than under autonomization. Under privatization, public hospital ownership is transferred to private hands.

The range of decisions that hospital managers are allowed to make are fairly similar in both case study hospitals (Table 7.4). An examination of the level of autonomy and decision space that the case study hospitals have paints a picture of a hybrid system where the hospitals have both the characteristics of a government unit and an autonomized organization. On paper at least, the government unit structure applies to resources provided by the central MOH while the autonomized system applies to the revenues collected locally. As it has been explained in the section 9.2 and it shall be seen in this section, the case study hospitals exhibited unintended features of such a hybrid system (World Bank 2011).

Table 7. 4: Decision space in case study hospitals

FUNCTION	LEVEL OF DECISION SPACE
BUDGETING AND PLANNING PROCESS	
Sources of revenue	Hospitals have mandate to set user fee rates. However central MOH can impose policies to waive user fees for specified patient groups and set limits for user fees
Allocation to departments	Hospitals have discretion over allocation of funds to hospital departments
Expenditures	Hospitals have no autonomy over expenditure items. Central MOH provides pre-determined (and narrow) expenditure items that hospital budgeting must comply with
Selection of priorities	Hospitals have no discretion over selection of priority diseases or service areas. MOH provides guidelines on priorities that can be selected
Selection of interventions to address priorities	Hospitals have discretion over selection of interventions

FUNCTION	LEVEL OF DECISION SPACE
MEDICINES SELECTION PROCESS	
Procurement	Hospital's selection of the type of medicines to procure from KEMSA was restricted by the essential medicine list developed by the central MOH. Hospitals have greater autonomy when procuring medicines from local suppliers
NURSING ALLOCATION PROCESS	
Recruitment	Hospitals have no mandate to hire or fire nurses. The MOH hires nurses and assigns them to hospitals and have the mandate to fire them.
Remuneration	Hospitals have no mandate to remunerate nurses. The central MOH sets remuneration rates, and remunerates nurses assigned to hospitals.
Human resource management	The central MOH has the mandate for performance management, effecting transfers and promotions. Hospitals can only deploy nurses across their departments

In examining the interaction between decision space and hospital priority setting, the case study hospitals, as CAS, are seen to respond to and adapt to conditions imposed by the larger system (the MOH) in which they are embedded. Specifically, both case study hospitals have adapted to situations where MOH regulations restrict the authority that hospitals have over certain decisions. For example, in both case hospitals, it is felt that the hospitals decision space with regard to the AWP is limited. Hospital managers indicated that they receive significant guidance from the central MOH on what to include in the AWP. This is also evident from document reviews of past hospital AWPs and AWP templates which reveal that the MOH provides a list of health priorities from which the hospitals can select. Managers in both hospitals feel that this limits the hospitals' autonomy in the sense that they cannot select health problems that are not listed by the MOH.

> *HAML013: "We don't feel like we contribute to the AWP [Annual work plan process]. It is like it is not ours. We just get these templates from the ministry and have to fill them according to instructions. The diseases are already listed there so just choose"*

> *HBML09: "The AWP is very rigid. We select diseases from a list that's it. Sometimes you want to include a priority but it is not in the list"*

Further, managers from both hospitals feel that the manner in which priorities are expressed in the AWP is not compatible with the activities undertaken by their departments. It was reported that the MOH requires priorities to be put in the AWP targeted at specific diseases such as malaria, HIV/AIDS, TB and diarrheal diseases. It is felt that these are mostly national priorities that the central MOH expects the

hospitals to adopt. Managers of departments such as physiotherapy and dental feel that they find it difficult to relate their departmental priorities in line with such requirements in the AWP.

> *HAML13: "When I attend those AWP meetings I don't see how my department's priorities can be included. It only talks about malaria and HIV and MCH (maternal and child health). I don't see how it applies to my department"*

The limited flexibility that hospitals have in the development of the AWP has resulted in a feeling that the process is not responsive to hospital needs. There is therefore a general feeling of lack of ownership and disinterest in the AWP process by the hospital managers, who see it as just a process that is conducted to meet government requirements but one that has little relevance to the hospital.

> *HAML14: "No one in the hospital cares about the AWP. The AWP to us is just a ministry document, not a hospital document. We just do it because it is a requirement"*

> *HBML06: "I don't think anyone ever looks at the AWP or follows up to implement it. People feel like the ministry forces us to fill it but it is not relevant to us. We feel that it has ministry priorities but not hospital priorities"*

In both case study hospitals, an emergent property to adapt to the constrained decision space over the AWP process is the development of a culture of what I will call here "feigned compliance". While managers appear to on paper comply with all MOH guidelines, templates and timelines for the AWP process, in practice they either do not implement them or act differently. Managers reported that they have to comply because it is an expectation of the MOH and also part of their performance contract. They however stated that this compliance is not translated into action because often these rules and guidelines are not in line with hospital priorities.

> *HBML22: "That AWP we just prepare it because it is a ministry requirement. But in reality it is not followed or used in the hospital."*

Another example of the influence of decision space is the medicines selection process. Managers in both hospitals reported having low autonomy over what and how much to procure from KEMSA. The MOH provides budget ceilings for the procurement of medicines and other essential supplies. The central MOH also provides guidelines for what can be ordered by the hospitals in the form of an EML. Hospitals can

only order medicines that are listed in the list. In both hospitals, managers complained that this list is very restrictive and does not adequately meet the medicines needs of the hospital. The situation is made worse by the fact that this list has been shortened over time to include only 50 medicines. To self organize in light of this situation, hospitals rely more on user fees to purchase medicines from local private providers, an avenue that is more flexible and responsive to hospital needs. As described in the previous section, this reliance on user fees resulted in greater non-linear consequences.

> *HAML05: "The KEMSA list [essential medicines list) has very few drugs. A lot of the things that we want to buy are not in the list so we have to buy locally"]*

> *HAML07: "The KEMSA list is not sufficient. They [KEMSA] actually reviewed the drug list recently and they removed some of the very key drugs like diclofenac and diclofenac injection. So the question was whose idea was it? How do you remove diclofenac and remain... retain aspirin in the list. That means now from next quarter we may have to start procuring diclofenac and other drugs that were removed from local suppliers"*

Perhaps the greatest decision space restriction is experienced in human resource decisions. Specifically for nurses, the authority to recruit nursing staff and to deploy them to hospitals around the country and promote them rests with the central MOH. Hospitals have no influence over which nurses are deployed to them or the number deployed. The hospital also has no influence over the remuneration of the nursing staff and mechanisms to discipline and/or motivate staff. This too is done by the central MOH. Respondents in both case study hospitals therefore feel that the hospital has no control over its skilled human resource:

> *HASM03: "We do not have control over human resources…..they are paid by the government, they can be transferred by the government…like now I cannot transfer someone to another hospital but I can just get a positing order from the government that someone has been transferred for here to another hospital and I have to release them…so we have no control over our human resources……"*

An emergent property of the reduced human resource planning decision space is the high turnover of nurses. This is because the central MOH often sends nurses who are not willing to work in particular hospitals. The hospital managers feel that if recruitment is done at the hospital level, only nurses who are willing to work in particular stations will apply for the jobs.

HASM03: "Our suggestion is that in future, if they are to employ nurses, let the nurses be selected by the hospital so that we interview and we select the ones who are willing to stay here. For example in the year 2004, we interviewed nurses and we took 10 and up to today those 10 nurses are still with us because we had people from all over the country and we selected people who committed they are going to remain in [town A], they are going to settle in [town A]."

HBSM02: "Currently, nurses are interviewed sometimes at the province but mainly at the ministry of health headquarters and then posted to us [the hospital]. We are not given a chance to contribute and have no choice but to accept the postings. Some of them request to be transferred immediately they get here. They want to go back. In fact some of them reported and left even before they were orientated. They said 'No, this is too far'"

The high turnover of nurses has contributed to the nursing shortage, which as explained in the previous section has resulted in unintended consequences.

7. 5 CHAPTER SUMMARY

This chapter has presented findings on the influence of hospital context on priority setting practices in case study hospitals. It emerged that priority setting in these hospitals is influenced to varying degrees and in varying ways by the hospitals financing arrangements, the scarcity of resources in the hospital, the decision space for making priority setting decisions, and the management and leadership practices in the hospital. It is clear that both case study hospitals rely heavily on user fee collections and experience severe resource scarcity resulting in the adoption of "revenue maximizing behavior" that promotes perceived unfairness or inequity in resource allocation. It also emerged that weak management capacity has weakened priority setting and resource allocation processes in both hospitals and led to the development of unrealistic plans and budgets which compromise their implementation. The difference in leadership between the case study hospitals is also seen to influence priority setting. Managers in hospital B feel that their medical superintendent is available to attend to their issues and that there is some fairness in allocations. Managers in hospital A however felt that there is a leadership vacuum which has been filled by a few other senior managers who have perpetrated unfairness and corruption. This has led to discontentment and disenchantment among managers in hospital A. The fact that hospitals have reduced decision space in the preparation of AWPs has resulted in reduced ownership of the process, while the fact that nurses are recruited by the central MOH has been blamed for the high turnover that is experienced in both case study hospitals. Lastly hospital culture is seen to significantly interact with priority setting practices. Key among them was the presence of a "government culture" that has led to

disinterest in participating in priority setting activities and poor implementation of planned activities. In the next results chapter, I will present results on the influence of actors, their interest and practices of power on priority setting practices in the case study hospitals.

CHAPTER VIII: RESULTS (PART THREE): THE INFLUENCE OF ACTOR DYNAMICS & PRACTICES OF POWER ON PRIORITY SETTING PRACTICES

8. 1 INTRODUCTION

In the previous chapter, I presented findings on the interaction between hospital context and priority setting practices in the case study hospitals. By examining the case study hospitals through the lens of CAS theory, it emerged that a number of contextual factors have presented hospitals with an environment that has resulted in emergent properties with significant influence on priority setting practice. A prominent feature of CAS is the role of agents and their interactions. Agents in hospital systems are the actors that make up the system. While the role of agents in influencing priority setting process has already been a common thread in the results presented in previous chapters, this chapter will explore and focus more on the role of the interactions between the agents, their interests and micro-practices of power in shaping priority setting practices. In doing so, I will use Norman Long's (1999) actor interface analysis to analyze actor dynamics and its influence in priority setting processes (4.2.5). Interface analysis is particularly useful given that it provides a means through which the platforms of interactions between actors and the power dynamics can be critically examined (Long 1999; Long & Jinlong 2009). A key feature of actor interfaces is practices of power. To explore the power dynamics at these interfaces, I will employ two frameworks. The first framework is John Gaventa's (2005) "power cube" framework that visualizes power as comprised of three dimensions namely 1) the forms of power 2) the spaces of power and 3) the levels of power (4.2.5). The second framework is the VeneKlasen and Miller's (2002) "expressions of power" which postulates that power is expressed in four main forms namely 1) power over 2) power to 3) power with and 4) power within (4.2.5). I use both these frameworks given that they are complimentary in examining the dynamics of power in organizational settings. While the power cube framework unpacks different useful facets of power dynamics, the "expressions of power" framework provides another useful dimension by conceptualizing power as something that is owned and expressed by actors in different ways (both positive and negative) (Pantazidou 2012).

Far from being a homogeneous and harmonious milieu of actors, their interactions in the case study hospitals seem to result in socially constructed interfaces. This chapter is organized around the key actor interfaces that are encountered in priority setting practices in both case study hospitals namely: 1) senior

managers and middle level managers 2) non-clinical managers and clinicians, and 3) hospital managers and the community. Within each set of actor interfaces, I explore the actors and their interactions in light of the power they possess, how this power is exercised and how these interactions influence priority setting processes.

8. 2 SENIOR MANAGERS AND MIDDLE LEVEL MANAGERS

One of the main actor interfaces, where power dynamics plays out in both case study hospitals is that of senior managers and middle level managers (Figure 6.2). In both case study hospitals, the authority vested in the position of senior managers, who constitute the EEC, means that they exercise power over the middle level managers, who form the HMT. The power differences between the two levels of managers was particularly observed in the budgeting process, which as shown in chapter 6, is the main priority setting activity in the hospitals. However, how this power is exercised differs between the two case study hospitals and shall be examined next.

Interactions between Senior and Middle Level Managers in Hospital A

In Hospital A, the dominant group of actors in the budgeting and planning processes is the EEC. This committee makes the actual allocation decisions and develops final budgets for the hospital (6.2.2). Middle level managers, who are also HMT Members, feel that the EEC is the most powerful decision making body given that they make the actual allocation decisions. The EEC thus derives their power from the fact that they have control over resources:

> *HAML14: "Those [EEC] are the people who actually allocate resources. Once you have that power to allocate resources then you are the most powerful person and you are actually the one who is planning for the whole hospital"*

The EEC in Hospital A therefore exercises *visible power* in decision making over budget allocations in the hospital. Further, by restricting HMT meetings to presenting budgetary requests, and deferring budgetary allocation decisions to the EEC, it appears that the senior managers in Hospital A also exercise some *hidden power* over budgetary decisions. Budget allocation decisions in this hospital are therefore made in the *closed space* of the EEC meetings, where middle level managers are excluded from participation.

Senior managers in Hospital A feel that the budgeting process has to be conducted in this manner because the middle level managers lack the capacity to develop hospital budgets at the level of the HMT. They

feel that if the budgeting process is left entirely to the HMT, it would take an unnecessarily long time to develop, and that the proposals would not be realistic. This justification by senior managers is however questionable, because in practice senior and middle level managers have comparable capacity to undertake budgeting exercises.

The exclusion from the budgeting process contributes to frustration and reduced motivation among the middle level managers. As shown in chapter 7, this exclusion is one of the reasons for reduced attendance and participation in HMT meetings among middle level managers. It has also created an atmosphere of suspicion and reduced trust between the middle level managers and senior managers. Middle level managers in hospital A feel that the budgeting process is not transparent and fair and suspect that some of the senior managers take advantage of the process and perpetrate corruption (7.3).

Even at the HMT meetings, senior managers, as individual members of the HMT are also thought to have *power over* by virtue of the positions they hold. In hospital A, I observed in the HMT meetings that the senior managers appear to be more vocal, while the middle level managers hardly participate in the discussions. The power difference between these two groups of managers is also evident in the organization, sitting arrangement and interactions during the meetings. The meetings are organized and called by the hospital administrative officer who together with the hospital accountant and medical superintendent set the meeting agenda timetable. These three also set the agenda of the meetings and circulate them to the other managers. At the meetings, I observed that senior managers and middle level managers sit in different places. Senior managers sit at a table in front of the room (high table) facing middle level managers who sit in seats arranged in rows (as in a classroom). During the meetings, there is hardly any deliberation and middle level managers appear reluctant to engage and participate in discussion. Views of senior managers carried the day and the middle level managers are expected to accept decisions without questioning them.

The medical superintendent, the hospital matron, the hospital administrative officer (HAO) and the hospital accountant are also thought to have significant power as individuals. This power is derived from the position authority they have as senior managers in the hospital:

> *HAML16: "People can argue and argue but what the medical superintendent says is final because he is the boss. If he says he will give you fifty thousand shillings that is what you will get"*

HAML09: "I think the matron has more powers than other managers...because of her position….the HAO [hospital administrative officer] also has a lot of power because he is the one that calls for and chairs the meetings"

In addition to the *power over* that the matron in hospital A has over middle level managers, she also exercises *power with* the other nursing ward in charges to exert greater influence over allocation decisions. Here the hospital matron is seen to exploit the absence of clear guidelines on the composition of decision making bodies to her favor (6.2.2). It was reported that within the HMT, the nursing department, represented by the matron have the most power because of their numbers. The Hospital matron in hospital A has incorporated all the nursing ward in-charges in the HMT which has lead the nursing department to have the highest number of representatives in the HMT:

HAML09: "The matron has incorporated all the nurses-in-charge of wards into the HMT and so she has control over most of the HMT members and so has significant influence over HMT decisions"

HASM04: "The matron has more power because she has the numbers and is more eloquent……the nurses can be able to make a lot of noise and their proposal is considered, but you are only a single person"

The power imbalance between senior and middle level managers is exacerbated by the fact that two senior managers not only appeared to wield power but also use it to their advantage. It was clear from my observation and from the feelings of other managers, that these two senior managers exercise significant influence over hospital decision making. For example, whereas there are official decision making structures in the hospital (HMT, EEC and HMC), I observed that these two managers always have side (informal) meetings before and after each of these committee meetings. In these side meetings, they deliberate and agree on their preferred outcome of the formal meetings, and steer the formal meetings to this outcome. In essence therefore, actual decisions are made in these side meetings rather than the formal meetings. This phenomenon has contributed to the distrust and perceptions of lack of transparency expressed by hospital managers and frontline staff (7.3).

These two managers therefore seem to exercise *power with* to exert influence over hospital priority setting decisions.

HAML08: "These are very sensitive issues I think he should handle…..I think he is overpowered by those two you know when they are the two they support each other"

It is also felt that these two senior managers derive power from the fact that they have access to crucial information needed for planning and budgeting.

HAML07: "They (the two senior managers) are important given that they have information which is useful for budgeting and planning……..for example they have information about finances….they are very important members such that if we plan a meeting and they do not come, it will be very difficult to do budgeting and planning"

Middle level managers in Hospital A complained of unfairness in resource allocations because these two "senior managers" wield excessive power and use it to favor their own departments and those of managers they enjoy good relations with. The power enjoyed by these two managers is such that middle level managers feel that any proposal for funding resource allocation in the hospital has a chance of receiving funding only if it receives their support. It was thought that managers that are not aligned to these two managers are significantly disadvantaged in resource allocation decisions.

HAML15: "Most of the time you bring up an issue or propose an idea and if those two (hospital administrator and hospital accountant) are not on your side, trust me it won't go through, it is as simple as that, so the two of them basically have to back an idea and the medical superintendent does not do anything about it.....I think he is just overwhelmed"

From the foregoing, the key outcome of the power plays at Hospital A is to breed an atmosphere of distrust, suspicion and frustration. The interaction of agents in the complex system that is Hospital A is seen to contribute to the emergent property or a "government culture". This is an example of how the actions (or more appropriately inaction) of one actor (the medical superintendent) in the complex system that is the hospital influences the actions of other agents (the two senior managers) and significantly affects relationships between all system agents (senior and middle level managers and frontline staff). The relationship between senior and middle level managers in hospital B was quite different and shall be examined next.

Interactions between Senior and Middle Level Managers in Hospital B

While the EEC in hospital B, similar to Hospital A is comprised of senior managers and the HMT of middle level managers, the power differences between these two levels of managers appear to be reduced or "managed". This is thought to be as a result of the medical superintendent's initiative to ensure priority setting in the hospital is an inclusive and consultative process (7.3). The presence and leadership of the medical superintendent in this hospital is felt (7.3). She exercises her *power to* and *power over* to ensure that all managers are included in the decision making process. For example, unlike in Hospital A, the hospital budget is deliberated on and finalized in the HMT at Hospital B (7.3). The EEC only rarely finalizes the budget, and when it does, it is only after "getting permission" from the HMT to do so. Hospital budgeting in Hospital B hence takes place in an *invited space* where both senior and middle level managers participated. The medical superintendent feels that it is only by developing the budget at the HMT level that all managers, senior and middle level would understand and accept the outcome of the process.

> *HBSM01: "We try to make sure that all managers are involved in the budgeting process. If the budget is developed by the HMT, then every manager gets a chance to contribute. This way the understand how difficult it is to develop the budget and they understand why they cannot always get what they ask for"*

I also observed in the budgeting meetings in hospital B that the atmosphere is less tense compared to the budgeting meetings in Hospital A and that all managers, senior or middle level felt free to speak out. The medical superintendent is keen to allow anyone who wants to speak in the meetings to do so. As a result, middle level managers feel included in the decision making process and think that the process is fair. The suspicion that accompanies the budgeting and resource allocation process in Hospital A is also absent in Hospital B.

> *HBML08: "We [hospital managers] are usually involved in the budgeting process and so there is nothing to hide. All the money collected is announced in the HMT and we decide on how to spend it. The process is transparent"*

The power difference between hospital managers is typical in other settings where decision making environments tend to be highly hierarchical and politically complex (Gibson et al. 2005). In these settings, like in the case study settings, power was derived from similar sources. For example, in Argentina, senior managers, with control over the hospital budget, like the hospital administrator and accountant in hospital

A, had more power compared to middle level managers (Gordon et al. 2009). This underlies the critical role that hospital leadership should play in balancing the interests and managing the power differences between different actors (Reeleder et al. 2006).

8. 3 NON-CLINICAL MANAGERS AND CLINICIANS

Another interface where power differences play out in priority setting practices is between hospital managers in general (hospital administration) and hospital clinicians. It was a general observation in both case study hospitals that clinicians do not participate in budgeting and planning activities for the hospital. In both case study hospitals, the EEC and HMT comprised of non-clinical managers except for the medical superintendent. Even though clinical departments such as obstetrics and gynecology and pediatrics are headed by clinician managers, these departments are represented in these meetings by the nurses rather than the clinician managers. In both case study hospitals, frontline clinicians do not attend these meetings. Senior managers feel that one of the reasons clinicians do not participate in budgeting and planning meetings is that they are not interested in participating in management or administrative activities and are only keen on their clinical responsibilities.

> *HASM05: "You know sometimes the problem is negligence.....because they are invited to the meetings and they do not come.....also they feel that their interest is taken care of by the medical superintendent"*

> *MBSM03: "The doctors are just not interested in hospital management issues. They know when we plan for the meetings but they don't show up because they prefer to be in the wards and the clinics"*

On closer examination however, it appears that one of the major contributors to non-participation of clinicians was professional identity. Clinicians in both hospitals do not seem to think that managerial responsibilities such as budgeting and planning are part of their roles as professionals. They identify themselves more with their clinical roles and consider time spent participating doing managerial duties as "wasted time".

Both senior managers and clinicians feel that the shortage of clinical staff has also contributed to the non-participation of clinicians in budgeting and planning meetings. This reason is also perhaps not totally honest given that, from my observations, clinicians do not spend most of their time in the hospital but rather dedicate a significant proportion of it to personal/private practice either in their own clinics or

neighboring private clinics. This was observation also echoed by middle level managers who reported that these clinical managers have set up private practices (or work part time in private clinics) and split their time between their government jobs and their private practice. They therefore have very little time left to attend to priority setting activities in the hospitals.

> *HAML12: "All these doctors locum in private clinics. The senior ones in fact have their own private clinics in town. So they don't want to come for budgeting meetings because it will eat on their time for their private practice"*

> *HBML20: "They [the doctors] have two jobs, here and in the private hospitals. So they cannot find time to participate in hospital management because they are busy making money in the private hospitals"*

Middle level managers in both hospitals also feel that another reason clinicians do not participate in budgeting and planning meetings is because they feel less motivated and frustrated by the scarcity of resources (7.2.4).

However, clinicians in both case hospitals reported that one of the main reasons they did not participate in priority setting activities is because they were not invited to participate. For the clinicians therefore, hospital budgeting and planning appeared to be a *closed space* that excluded them. It was also evident from their responses that they have poor knowledge of the priority setting activities that take place in the hospital. For example, clinicians interviewed are generally not aware that the hospital prepares AWPs. They are also not aware of the decision making structures in the hospital such as the HMT, EEC and HMC. Clinicians feel that they are excluded from priority setting activities and that these activities are controlled by a "clique" of hospital managers:

> HAFL28: *"I have never attended an annual operational planning meeting, either because of, you know, sometimes you are not even aware there is a meeting going on, because it seems like there is a certain clique of people who are always involved in those meetings"*

Clinicians also feel that one of the reasons they have little influence is their lack of planning and budgeting skills (7.3).

It appears that over time, because of this exclusion, clinicians in both hospitals have come to accept their non-participation as the norm. Hospital administrators hence appear to exercise *invisible power* over priority setting processes such that, clinicians have come to believe that it is not part of their role or their right to participate in these processes.

> *HBFL22:"To be honest the reason why I have not attended some of these meetings is because I have not seen my fellow colleagues attending the meeting. My senior colleagues...because when you report to a certain institution sometimes you tend to do what people do, you follow the norms"*

In both hospitals however, clinicians appear to exert more influence over the medicine selection decisions. This was because these decisions required expert knowledge on medicines which the non-clinical managers did not have. For decisions that required clinical knowledge therefore, clinicians exercised their power derived from the position of technical knowledge.

> *HASM05: "Of course the clinicians have an influence. They are the guys who prescribe medicines. Sometimes different clinicians have different preferences for medicines to use for certain conditions. Take me for instance. If I am treating a certain condition, out of experience I know this drug works much better than the other drugs so I'll request for it to be stocked by the pharmacy"*

> *HBFL21: "The doctors determine what medicines the pharmacist will buy. This is because they deal with the patients and so they know what medicines the patients need. So they tell the pharmacist to stock the medicines that they think are needed by their patients"*

At the interface between non-clinical hospital managers and clinicians, the key outcome is the exclusion of clinicians from hospital priority setting processes. In both case hospitals, this exclusion is thought to result in the misrepresentation of clinical priorities. Clinicians feel that non-clinical managers do not have an understanding of clinical needs and therefore cannot adequately articulate them in priority setting meetings. It was reported by non-clinical managers that often clinical priorities are not included in plans and budgets because there is inadequate representation of clinicians in meetings.

> *HBFL26: "Some of the things are dealt with by the office of the administrator....since he is not a clinician he does not understand what we go through..."*

Perhaps more importantly, the fact that clinicians do not participate in priority setting activities means that only values of one set of actors (hospital managers, who were non-clinicians), dominate decision making. Partly because of the socialization from professional (non-clinical) background and also because of the knowledge (or lack thereof) they possess, non- clinical managers place more value on considerations that have administrative importance. For example, in deciding whether or not to fund a proposal, they are more concerned about whether the hospital can afford to fund the activity, and whether the activity has the potential to generate revenues that can add onto the hospital resource envelope. The managers thus operate under a *fiscal-managerial* decision system (Greer 1985). On the other hand, clinicians are more concerned about the needs of the patients (regardless of whether they are paying patients or not) and their ability to deliver health care services to these needy patients. Clinicians are also concerned about whether services are effective and of good quality. They therefore operate under a *medical-individualistic* decision system (Greer 1985). However, given that clinicians are excluded from decision making processes, the *fiscal –managerial* value system dominates priority setting decisions. The dominance of non-clinical manager values perhaps (alongside resource scarcity and reliance on user fees (7.2.4)) contributed to the emergence of the revenue generation criterion in decision making which resulted in the case study hospitals operating under a "revenue-maximizing" model (Figure 8.1). As discussed previously, this has resulted in the inequitable allocation of hospital resources, where high revenue generating departments are favored over low or non-revenue generating departments (7.2.4).

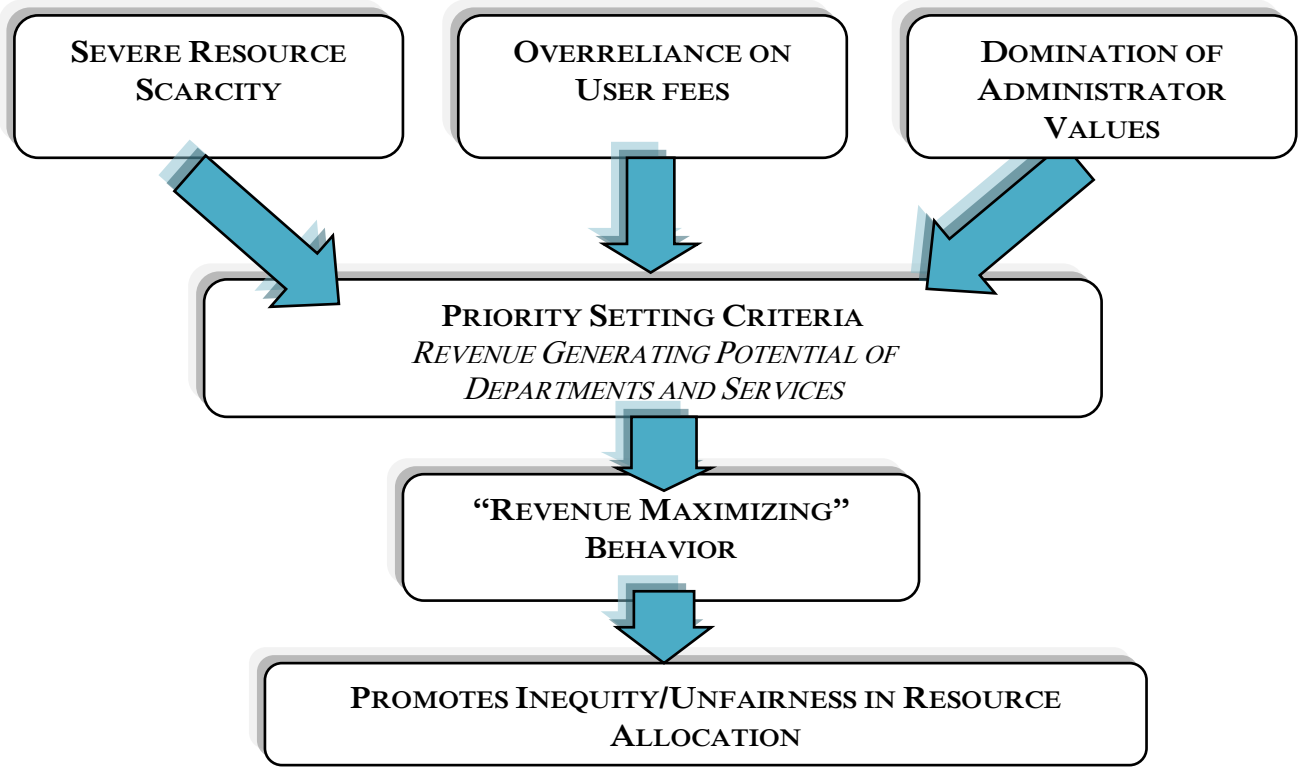


Figure 8. 1: Revenue Maximizing Behavior of Hospitals

Power struggles between hospital managers and clinicians have been documented elsewhere. For example, a study of a hospital in Uganda reported that hospital managers were reluctant to share decision making power with frontline clinicians (Kapiriri et al. 2006). The power balance between hospital managers and clinicians however appears to be dependent on whether priority setting decisions required specialized skills and if so, the type of skills required. This is because professional power is typically derived from the possession of specialized skills (Gibson et al. 2005). In settings where priority setting decisions rely significantly on management skills, managers exercised more power, while in settings where priority setting was significantly influenced by clinical considerations, clinicians exercised more power. This would explain why in the Kenyan case, managers exercise more power over budgeting decisions, while clinicians appear to influence medicine selection decisions more. Further the tensions between the two models of actor values, the medical individualist decision system and the fiscal managerial decision system has been shown elsewhere (Greer 1985, Danjuox et al .2007, Gordon et al. 2009). This conflict was however more evident in scenarios where decisions affected identifiable patients such as medicines selection processes (Gallego et al. 2007).

8. 4 HOSPITAL MANAGERS AND THE COMMUNITY

Interactions between hospital managers and the community also provided a platform for the exercise of power. In both case study hospitals, priority setting activities are undertaken by hospital staff either as individuals (in the case of nursing allocation and medicine selection) or as committees (the HMT and the EEC) that do not have community representation. Priority setting activities in hospitals therefore seem to occur in *closed spaces* where the community is not included. Hospital managers in both hospitals feel that it would be difficult to include community members in hospital priority setting meetings because they do not possess the technical capacity to contribute effectively.

> *HASM06: "The problem with community members here is that most of them are uneducated. It is difficult for them to take part in decision making because they don't have much knowledge"*

> *HBML11: "The community members are not well trained to take part in budgeting. It can be very difficult to involve them in such a process"*

It is also thought that it would be problematic to include community members in priority setting decisions because they would lack objectivity to make allocation decisions but rather would be biased by their experiences and their healthcare needs.

HASM04: "The problem with community members is that they only think of what affects them. If you involve them in decision making, they might just promote things that affect them only"

In both case study hospitals, the community is, on paper, only represented in the HMC, which as an oversight committee of the hospital. In both hospitals however there are concerns about the representation of the HMC's. It is felt that the members of these committees are not selected through fair and transparent processes but rather based on perceived relationships with local politicians or hospital senior managers.

HASM03: "How are the members selected? It depends on who they know. If you are a friend of the politicians or the senior managers in the hospital then you are made a HMC member"

HBSM04: "HMC members are cronies of local politicians. That is how people are selected to be in HMC. It is not a transparent process"

These HMC members are therefore not thought to represent community members. Further, the fact that their selection is influenced by the hospital managers means that they feel indebted to them. This is because HMC member benefit by drawing (financial) sitting allowances and prestige from the position. Further their oversight position provides them with an opportunity to access information that would enable them to influence and/or benefit from hospital procurement tenders. It is thought that the HMC members are careful not to go against the wishes of the hospital managers so as to retain their support for membership in the HMC. Therefore, whereas on paper the community members, through the HMC, have an oversight responsibility over the hospital, in practice the HMC is not empowered. In both hospitals, it was reported that the HMC is passive and merely "rubberstamps" hospital decisions. For example, whereas the HMC is required to review and amend (if necessary) the budget developed by hospitals, in practice they have adopted a passive role and approve the budgets without serious scrutiny.

HAML14: "The HMC is toothless, they just rubberstamp decisions. They don't want to step on the toes of the hospital managers because they are the ones that influenced their selection"

HBML17: "The committee [HMC] cannot ask any questions. They just accept the decisions of the hospital because they are powerless"

At the interface between the hospital and the community, the exclusion of the community from priority setting processes means that community voice is not directly incorporated in hospital decision making

and puts to question both the responsiveness of the hospital to community needs and the legitimacy of the decision making process.

The exclusion of the community in priority setting practices in hospitals is a common and recurrent theme across different settings (Barasa et al, 2014). Studies of priority setting practices in both developed and developing countries have revealed an unwillingness of hospital managers to share the decision making space with the community. For example, it has been shown that there is limited community involvement in healthcare priority setting practices in Uganda (Kapiriri et al. 2003), Tanzania (Flumence et al. 2013) and Colombia (Mosquera et al. 2001). In all these settings the community has been involved mostly through oversight hospital committees whose representation and legitimacy was questioned.

8. 5 CHAPTER SUMMARY

In this chapter, I have presented findings on the influence of actor dynamics and practices of power on priority setting practices in case study hospitals. It emerged that actors interact at three main interfaces in both case study hospitals namely 1) the senior managers and middle level managers 2) the non-clinical managers and clinicians and 3) the hospital managers and the community. Actor dynamics are shown to be similar across both case study hospitals for each of the interfaces except for the senior managers and middle level managers interface. At this interface it was shown that while in Hospital A there are significant power imbalances between senior and middle level managers, in Hospital B this imbalance is managed by the hospital medical superintendent. In hospital A, actual budgeting decisions are undertaken in the closed space of the EEC while in hospital B, the budgeting process is open to both senior and middle level managers in the HMT committee. Even though the HMT in hospital A holds budgeting meetings, actual budgeting decisions are deferred to the EEC, an exercise of hidden power by the senior managers. It was shown that unmanaged power imbalances provide opportunities for those with greater power to influence decisions to their advantage, and breeds an atmosphere of distrust, lack of motivation and perceptions of unfairness. It was also shown that power imbalances can result in the exclusion of specific actors from priority setting processes, in this case clinicians and the community, and puts in question the fairness and legitimacy of decision making processes. Given that often specific segments of actors possess varying values, the lack of inclusivity in decision making processes allows for the domination of specific values at the expense of others. In the case of the study hospitals, the exclusion of clinicians and hence domination of administrative values has contributed to the transformation of the case hospitals into “revenue maximizers” with undesirable implications for the equity in resource allocation in the hospitals. All these underlie the importance of structuring and managing hospital decision making process in hospitals such that power differences are balanced, and that inclusivity is ensured. In the next

results chapter, I will present results on the evaluation of priority setting practices in the case study hospitals.

CHAPTER IX: RESULTS (PART FOUR): THE EVALUATION OF PRIORITY SETTING PRACTICES IN CASE STUDY HOSPITALS

9. 1 INTRODUCTION

In the previous three results chapters, I described 1) priority setting practices in the case study hospitals, 2) the influence of hospital context on priority setting practices and 3) the influence of actors and practices of power on priority setting. In this chapter, I evaluate priority setting in the case study hospitals using the framework developed in the literature review (3.3) and presented in the methods (5.2.3). This framework draws on ideas from *proceduralist* and *consequentialist* approaches to priority setting to propose an integrated evaluation approach in which meso level priority setting practices in healthcare institutions are seen as appropriate if they espouse specified substantive principles, procedural conditions and results, and are grounded on community values (5.2.3). In this chapter, how each case study hospital performed on each of these conditions is presented and discussed.

9. 2 EVALUATION OF PRIORITY SETTING

In this section, I will present and compare findings on priority setting practices in the two case hospitals against the adopted evaluation framework. Table 9.1 presents a summary of these findings. The section will begin by presenting findings on the incorporation of community values, followed by the use of substantive principles, procedural conditions and finally the results of priority setting practices.

Table 9. 1: Summary of Findings on the Evaluation of Priority Setting Practice in Case Study Hospitals

CONDITION	HOSPITAL A	HOSPITAL B
Community values	In both hospitals, there is no effective mechanism for incorporating community values	
SUBSTANTIVE PRINCIPLES		
Efficiency	In both hospitals, an attempt to incorporate efficiency, by considering affordability of alternatives has been incorporated in decision making	
Equity	In both hospitals, equity is not incorporated in decision making	
PROCEDURAL CONDITIONS		
Stakeholder engagement	Frontline practitioners and middle level managers are excluded from decision making	Frontline practitioners are excluded from decision making

CONDITION	HOSPITAL A	HOSPITAL B
PROCEDURAL CONDITIONS		
Stakeholder empowerment	Middle level managers, frontline practitioners and community representatives are not empowered	Frontline practitioners and community representatives are not empowered
Transparency	Low transparency	Moderate transparency
Revisions	In both hospitals there is no provision for revisions	
Use of information/Evidence	In both hospitals, the quality of information used for decision making is low	
RESULTS OF PRIORITY SETTING PROCESS		
Stakeholder satisfaction	Low stakeholder satisfaction	Moderate stakeholder satisfaction
Stakeholder understanding	Low stakeholder understanding	Moderate stakeholder understanding
Shifted priorities	In both hospitals, priority setting practice does not result in shifted priorities	
Implementation of decisions	In both hospitals, there is low implementation of decisions	

9. 2.1 Community Values

Using Gavin Mooney's (1998) conception of communitarian claims, healthcare priority setting practices should be guided by values drawn from the community. The role of the community is not seen as that of making technical decisions, but rather as determining the "meta rules" that will form the basis for technical decisions by professionals (Mooney 1998). Healthcare institutions should therefore have mechanisms to obtain and integrate community values in their decision making.

In both case study hospitals, community views are obtained through two mechanisms namely the suggestion box and community representatives in the HMC. Both mechanisms are however not seen to be effective as mechanisms of channeling community views. In both case study hospitals, it was reported that the suggestion box is hardly opened by the hospital administration, and that even when it was opened, the views expressed in the contents are rarely incorporated in decision making. Using Rowe and Frewer's (2000) framework, the suggestion box falls under the "communication" form of obtaining community views. It is a form of one way communication where community members write their suggestions or complaints on a piece of paper and drop it into the suggestion box. This mechanism does not provide for feedback from the hospital management or engagement and debate between managers and communities. The fact that in both hospitals the contents of suggestion boxes are hardly ever examined or incorporated in decision making means that as a means of obtaining community views, this mechanism is not particularly effective.

The incorporation of community representatives in the HMC is also shown to be an ineffective mechanism for obtaining community values in both hospitals. Even though on paper, this mechanism can be classified as a "participatory" mechanism where deliberation occurs between the hospital managers and the community representatives, in practice this mechanism was shown to have two main short comings in the case study hospitals. First, the method of appointing community representatives into the committee is thought not to be transparent and inclusive (8.4). Second, given that the community representatives are beholden to the senior hospital managers, their role in hospital priority setting is seen merely as that of "rubber stamping" hospital decisions given that they hardly questioned or contributed to hospital decision making (8.4). The community representatives in this committee are therefore not empowered to contribute to decision making and therefore this mechanism, as designed and implemented in the case study hospitals, can also be said to be an ineffective mechanism for obtaining community views.

Generally therefore, in both case study hospitals, it can be concluded that there is no effective mechanism in place to obtain and integrate community views into priority setting decisions. The finding of limited community involvement in hospital level priority setting resonates with experiences from other settings reported in literature (3.2).

9. 2.2 Substantive Principles

Efficiency and Equity

Given that priority setting is necessitated by the need to tackle the challenge of resource scarcity versus unlimited healthcare needs, allocative efficiency has been widely acknowledged as a relevant principle that should guide priority setting processes (Norheim et al. 2007). For a priority setting process to be oriented towards achieving allocative efficiency, it should incorporate a systematic mechanism that seeks to maximize outcomes within the constraint of available resources. Examples of such mechanisms in healthcare priority setting include economic evaluation methods such as cost-effectiveness analysis (CEA) and programme budgeting and marginal analysis (PBMA). An examination of both case study hospitals, however, reveals that priority setting decisions across the three tracer activities are not guided by such mechanisms to achieve efficiency. Hospital managers were unfamiliar with this concept and specific methods such as CEA and PBMA. When I explained the basics and rationales of these methods, they responded that although the methods were potentially useful in decision making, they lacked the technical skills and data required. Even though these "sophisticated" methods are not employed by the case study hospitals, priority setting tools used at the hospital level such as the essential medicines lists (EML) are developed nationally based on, among others, evidence of cost-effectiveness. It can also be

argued that there is an attempt to incorporate efficiency by considering the affordability of competing priorities. By taking into account the costs and affordability of competing priorities, managers are recognizing budget limitations and the need to make decisions such that the hospital can get the most out of available resources. This finding is consistent with my literature review (3.2) where only 3 out of the 24 included studies reported the use of economic criteria as a consideration in hospital level priority setting.

While maximizing outcomes from scarce resources is generally desirable, it is also important that individuals be given fair chances to receive those scarce resources. In this thesis equity in allocation of resources refers to the absence of systematic disparities in healthcare resource allocation across patient groups. While the central MOH has put in place a user fee waiver policy aimed at enhancing equity by prioritizing access to service by vulnerable populations (children and the disabled), in both case study hospitals, unintended policy effects has resulted in the underfunding of these services and thus the introduction of inequities (7.2.4). In both hospitals therefore, revenue maximization trumps equity. Further, the reported favoritism in resource allocation given to departments whose managers enjoyed good relationships with senior management can also be considered as a source of inequity (8.2). Nevertheless, it can be argued that the priority given to departments handling emergencies such as theater and maternity demonstrates a special concern for the worse off and is hence a form of incorporating equity in hospital priority setting.

While equity has been discussed as a consideration in priority setting at both macro and micro levels, its application to priority setting at the meso level in hospitals is limited. In my literature review, only 2 out of the 24 included papers reported the use of equity as a consideration of resource allocation (3.2). In one of the papers, Astley and Wake- Dyster et al (2001) describe a priority setting process in a Women's and Children's hospital in Australia that incorporates PBMA, community values and evidence. In this case, the equity criteria requires that hospital services are 1) designed to treat or prevent the major health problems for groups most disadvantaged according to health outcomes statistics available and 2) designed to improve access to those groups who experience barriers to health care (Astley and Wake- Dyster 2001). Valdebenito et al (2009) report on the use of "equality, equity, dignity, universal access to health care" as a key consideration in hospital level priority setting in a Chilean hospital. While equity is not explicitly stated as a goal, it could be argued that it is reflected in criteria that embody different definitions of equity. For example, a number of studies have reported the use of medical need (Bell et al 2004, Gallego et al 2007, Valdebenito et al 2009) and rule of rescue (Bell et al 2004) as a criterion in

hospital level priority setting. We will now turn our attention to procedural conditions of priority setting practices.

9. 2.3 Compliance with Procedural Conditions

Procedural conditions used to evaluate priority setting in this framework are grounded on the principles of deliberative democracy. Deliberative democratic processes are thought to result in *"procedural fairness"* and have more legitimacy (Chambers 2003).

Stakeholder Engagement

Stakeholder engagement refers to an organization's efforts to identify the relevant internal and external stakeholders and to involve these stakeholders effectively in the decision- making process (Sibbald et al. 2009). For hospital level priority setting, relevant stakeholders include, at a minimum, administrators, clinicians, and members of the public (Coulter & Ham 2000). The active inclusion of relevant stakeholders in priority setting process is firmly grounded in deliberative democratic ideals (Chambers 2003). Stakeholder engagement varies across priority setting activities and between the case study hospitals. Generally, the hospital budgeting and planning process is more inclusive (6.2), followed by the medicines selection process (6.3), with the nursing allocation being the least inclusive process in both hospitals (6.4). The degree of inclusivity however varies across the case study hospitals, with Hospital B conducting their priority setting in a more inclusive manner than Hospital A (7.3,8.2).

Stakeholder involvement has been examined in a number of studies on hospital level priority setting. The most commonly excluded stakeholders in most settings are frontline practitioners and the community (3.2). While stakeholder engagement is desirable, it is only effective if the stakeholders are empowered to contribute to decision making. This shall be examined next.

Stakeholder Empowerment

Empowerment is used here to refer to the ability of a stakeholder to effectively contribute to decision making. Stakeholders are said to be empowered if there is opportunity for them to voice their opinions and that these opinions are considered and potentially incorporated in decisions. The level of empowerment of different stakeholders varies between the case study hospitals. In hospital A, middle level managers appear to have a low level of empowerment to participate in priority setting activities compared to hospital B (8.2)

While empowerment has not been documented specifically for hospital level decision making, findings in other levels in the health system offer useful lessons. It has been shown that the empowerment of stakeholders is not automatic and that a number of factors come into play. For example in Tanzania, effective participation of the public in priority setting decisions was influenced by gender, wealth, ethnicity and education (Shayo et al. 2013).

Transparency

Deliberative democracy literature has generally considered transparency in decision making processes as the extent to which decisions about resource allocation and the rationales for these reasons are accessible to the relevant stakeholders (Chambers 2003). Based on this definition, the extent to which priority setting practices are transparent varies between the case study hospitals and across the priority setting activities. Generally, Hospital B exhibits more transparency compared to Hospital A, while in each of these hospitals, the budgeting and planning process is more transparent compared to the medicines selection process, which is in turn more transparent compared to the nursing allocation process.

In Hospital A, there is no mechanism in place for disseminating budgeting and planning decisions. Once the final budgets and AWPs have been prepared, they are not shared with the hospital managers. Only selected senior managers have access to these documents. Managers reported that they have to follow up with the hospital accountant or administrator to obtain information about the final outcome of the budgeting process. The same applies for the AWP process. For both processes, the reasons for decisions are not communicated to the managers. Front line practitioners also reported that they are in the dark as far as budgeting and planning decisions in the hospital are concerned. Managers and front line clinicians in this hospital also reported having no knowledge of the outcomes and reasons for medicine selection and nursing allocation processes. This is because these two processes are undertaken informally in this hospital and are led by one individual (the hospital pharmacist and nursing officer in charge respectively), with no communication mechanism (6.3, 6.4). For example, managers complained that they would often find that their nursing staffs have been moved without any communication. Front line practitioners complained that they are not made aware of the medicines that have been procured and hence available in the hospital.

In Hospital B, the fact that budgeting and planning is a more inclusive process means that managers generally are more aware of the budgeting and planning decisions and the rationales behind them. They therefore reported that the process is transparent. However, they also reported that, like in Hospital A, final budgets and work plans are not made available to them unless they individually sought for them. The

medicines selection process is also more transparent compared to Hospital A given that decision making is more inclusive. As presented in the previous chapters, medicines selection decisions are made in a committee (medicines and therapeutic committee) that is constituted by departmental representatives. The fact that the hospital is developing a medicines formulary meant that hospital managers and clinicians will have access to information on what medicines have been selected for use in the hospital. Further, a list of medicines that have been procured and are available at any given time in the hospital is circulated to the different clinical departments. It was generally felt therefore that the medicine selection process is transparent. The reasons for decisions on medicines selection are however not communicated and hence this element of transparency is lacking. The nursing allocation process in hospital B is not considered to be transparent and is similar to that of Hospital A, where decisions are made by one actor (the nursing officer in charge) without communication of either the decisions or rationales to other actors.

In both case study hospitals, it appears that communication of decisions is not given high importance. Information is often disseminated informally to managers or staff who actively sought it. For example, managers have to follow up and seek information about the outcome of the budget allocation meetings on an individual basis, since there is no official communication of the decisions. The lack of transparency in priority setting in case study hospitals mirrors findings on priority setting in other settings. It has generally been observed that while decisions of priority setting practices might be communicated, rarely are rationales for these decisions communicated (Barasa et al 2014).

Use of Quality Information

In both case study hospitals, decisions are rarely made based on information/evidence. Information is gathered using formal channels such as the hospital management information system but ignored. Decision makers often use their gut feeling and hearsay as the basis for decision making. When information is used, the use is *symbolic* rather than *functional*. That is, information is used to justify rather than clarify decisions. Decisions are first made and then information is sought to justify the decisions. One of the reasons given for the low use of information is that the quality of information available is questionable. Managers reported that data captured in clinic registers often has gaps and does not capture all events. They also complained that the data captured in clinic registers is not accurate.

Revisions

In the case study hospitals, whether or not priority setting decisions can be appealed and/or revised is dependent on the nature of the priority setting activity. It appears that the more formal and centrally (MOH) controlled a process, the more inflexible it is to appeal and revise the decisions, and vice versa. For example, in both case study hospitals the budgeting and planning process does not have a provision

for a formal appeals and revisions process. This is mainly because this is a highly formal process with prescriptive and inflexible guidelines from the central MOH that does not provide for revisions. Once the quarterly budget or the AWPs have been prepared and approved, they cannot be changed or altered over the course of the planning period. This means that the decision making process is inflexible and cannot be improved with emerging information. It also means that there is no formal avenue for parties to contest planning and budgeting decisions. In both hospitals, however, the situation is different for the medicines selection process and the nursing allocation process, which are more informal. While there is no formal process for appeals and revisions of decisions, it was reported that revisions are possible informally. Actors that are not happy with these priority setting decisions often follow up informally with the responsible senior managers to argue their case and revise decisions. For example, it was reported in both hospitals that often nursing allocation decisions are followed up by one-on-one negotiations between the nursing officer in charge and disgruntled nurses or managers and revisions where possible.

This finding reflects findings reported from literature on hospital priority setting practices in other settings. In my literature review, only 4 out of the 12 studies that evaluated priority setting reported the presence of a formal appeals process while the other 8 reported the presence of informal mechanisms where dissatisfied staff would seek redress directly with the hospital chief executive (3.2). Among the studies that reported formal appeals processes, this was found to be a fundamental component to overall perceived fairness of the priority setting process (Madden 2005). The appeals process also enhanced the involvement of stakeholders and increased overall participant satisfaction (Madden 2005).

9. 2.4 Results of Priority Setting Processes

Stakeholder Satisfaction

It has been observed that the satisfaction of stakeholder groups in a priority setting process is key to its success (Sibbald et al. 2009). Satisfaction is indicated by degree of contentment as well as the continued willingness to participate in the process. Stakeholders may be able to accept priority setting decisions, even if though may not always agree with the outcomes (Sibbald et al. 2010). The level of satisfaction with the priority setting process varies between hospitals and across the priority setting activities. In Hospital A, stakeholders generally reported not being satisfied with all the three priority setting activities for a number of reasons. First, the priority setting process in Hospital A is generally not inclusive, leaving most stakeholders disgruntled (7.3, 8.2). Second, the scarcity of resources meant that hospital managers are not satisfied with the resources that are allocated and are available to them (7.2.4). Third, the use of revenue generation potential as a criterion for priority setting has left the managers whose departments generate little revenue disgruntled (7.2.4). Fourth, there are suspicions of corruption among a few senior

managers (7.3). All these have led to a general sense of unfairness and resultant lack of satisfaction in the priority setting process in this hospital.

In Hospital B, the stakeholders reported having some level of satisfaction with the budgeting and planning process and the medicines selection process. While they are unhappy with the limited availability of resources, they seem to understand the scarcity situation. It appears that this general satisfaction with the process is due to the fact that they are included in these priority setting processes. However, managers of departments with low revenue generating potential, like in Hospital A, are unhappy with the process. Further, like in Hospital A, managers in Hospital B are also not happy with the nursing allocation process given that it is not inclusive and is led by one manager (the nursing officer in charge).

The determinants for satisfaction with priority setting process in the case study hospitals mirror those found in other settings. For example, an evaluation of priority setting in a Canadian hospital reported that stakeholders were not satisfied with the process when there was lack of, or poor communication about the process and when they were excluded from the process (Sibbald et al. 2010).

Stakeholder Understanding (Awareness)

Stakeholder understanding implies that all relevant stakeholders have insight into the priority setting process (e.g. goals of the process, rules and guidelines, procedures used, rationale for priority setting and rationale for priority setting decisions). Stakeholder understanding increases their acceptance and confidence in the process (Sibbald et al. 2010). How well stakeholders understand the priority setting process is linked to the procedural conditions of stakeholder engagement and transparency. This is because people will only understand a process well if they are involved in it and its outcomes and rationales are adequately communicated to them. In both case study hospitals, the level of understanding of the priority setting process is low among stakeholders. This level of understanding varies across stakeholders and is dependent on the level of their engagement. For example, while in Hospital A the middle level managers have a low level of understanding of the budgeting process given that they are excluded from it, in Hospital B, the middle level managers reported adequate understanding of the process because they are involved in it.

Shifted Priorities (reallocation of resources)

A priority setting process should ideally result in changes in the allocation of resources. It has been observed that when priority setting processes do not result in change, it leads stakeholders to view it as an

inefficient use of time or mere window-dressing for predetermined outcomes (Sibbald et al. 2009). In both case study hospitals, priority setting processes do not result in shifted resources. This is because priority setting processes in these hospitals are significantly guided by historical allocations. This meant that departments or services that historically receive a larger share of resources continue to do so and vice versa. The priority setting process is therefore not responsive to the changing dynamics of resource needs. Consistent with literature, this observation has resulted in the perception by stakeholders in both hospitals that the priority setting processes are a waste of time. The importance of reallocation of resources as a result of priority setting processes has been reported in literature. For example, stakeholders in a hospital in Canada observed that a priority setting process should result in changes in organizational priorities reflected by a reallocation or resources (Gibson et al. 2004). Sibbald et al (2010), in an effort to identify indicators of successful priority setting and test these in a pilot study, identified the shifting of priorities as one of the results of a successful priority setting process. In their pilot study, they reported that resources were reallocated as a result of priority setting processes in a hospital in Canada (Sibbald et al. 2010).

Implementation of Decisions

Ultimately, decisions made during a priority setting process should result in implementation. Without implementation, stakeholders will view the priority setting process as a waste of time. The implementation of priority setting decisions varies across the priority setting activities that are examined, but is fairly similar between the case study hospitals. The budgeting and planning processes in both hospitals are considered to be mainly an activity on paper that is hardly implemented in practice. As presented in previous chapters, a number of reasons have led to the lack of implementation of decisions including the lack of resources, *feigned compliance* due to perceived lack of local relevance by national guidelines, a *government culture* and lack of a strong accountability mechanism. The implementation of medicines selection and nursing allocation decisions is mainly compromised by resource scarcity.

9. 3 CHAPTER SUMMARY

In this chapter, I have presented findings on the evaluation of priority setting practices in the case study hospitals. In doing so, I have employed a framework that examines four main aspects of priority setting namely 1) the role of community values 2) substantive principles 3) procedural conditions 4) results of priory setting processes. In both hospitals, there is no effective mechanism to incorporate public values in priority setting processes. If we are to accept that hospitals, as social institutions, should base their priority setting decisions on the values of the community, then the legitimacy of the priority setting process in the case study hospitals could be put to question. It also emerged that in both hospitals, an

attempt has been made to incorporate efficiency by using affordability as a decision criterion. Both hospitals however lacked the awareness, skills and relevant data to use methods such as cost-effectiveness analysis or PBMA. The use of revenue generation as a criterion meant that resource allocation decisions were inequitable, even though the use of rule of rescue demonstrates a special concern for the worst off. While hospital managers think that these principles are important, they lacked the mechanism and/or capacity to implement them. The level of compliance with procedural conditions varies between hospitals. Generally, Hospital B fares better in incorporating deliberative democratic principles in priority setting processes compared to Hospital A. For example, Hospital B is better at stakeholder engagement, empowerment and transparency. This was also reflected in the results of priority setting, where it was observed that there is better stakeholder acceptance and understanding in Hospital B compared to Hospital A. Both hospitals are however poor in a number of procedural as well as results of priority setting. For example, both hospitals lack a formal process of appeals and revisions and hardly use evidence/information in decision making. The priority setting process in both hospitals also does not result in shifted resources and decisions are hardly implemented. From the foregoing, it is clear there is scope for the improvement of a number of aspects of priority setting in the case study hospitals. In the next chapter, I will provide a discussion of the results and offer proposals to policy makers on how to improve priority setting practices in case study hospitals.

CHAPTER X: DISCUSSION OF RESULTS, POLICY AND RESEARCH IMPLICATIONS

10. 1 INTRODUCTION

This chapter provides a summary of the main findings of the study along the objectives that were set out at the beginning of the research. The chapter has three main sections: section 10.2 summarizes key findings based on the main topics of interest: description of priority setting practices, examination of the influence of contextual factors that affect priority setting practice in public hospitals in Kenya, examination of the influence of actor and power relations on priority setting practices and evaluation of priority setting practice. Section 10.3 presents policy issues that can be addressed in order to improve priority setting practices in public hospitals in Kenya and areas for further research. Finally, section 10.4 provides a chapter summary.

10. 2 SUMMARY OF FINDINGS BY KEY OBJECTIVES

10. 2.1 Description of Priority Setting Practices

One of the objectives of this thesis was to describe priority setting practices in public hospitals in Kenya. A key observation emerging from the description of priority setting practices is that the case study hospitals are organizations with weak tangible software of systems and procedures. A number of priority setting guidelines and/or systems appear to be weak and/or missing in the case study hospitals (6.2.2). Consistent with CAS, this phenomenon reflects the properties of the larger system, the MOH, in which the case hospitals are embedded sub-systems. The MOH is responsible for developing guidelines for the management of public hospitals and the conduct of activities such as hospital budgeting and planning processes. The systems and guidelines within the MOH for budgeting and planning for the sector have been shown to be weak (Tsofa et al, unpublished). Within the MOH, the budgeting process is controlled by one set of actors, the department of economic policy, while the AWP process is controlled by another set of actors, the department of technical planning. While these are both departments of the MOH, it has been observed that these departments do not work in a coordinated fashion; they operate on different timelines, leading to mal-alignment of the budgeting and planning processes (Tsofa et al, unpublished). This state of confusion within the MOH is clearly seen to replicate itself in the embedded sub-systems, the public hospitals. As long as the role of guidelines and procedure development continue to lie with the central MOH, or the county governments in the new constitutional arrangement, then a resolution of the lack of clarity of guidelines and systems within hospitals has to start with the central (or county)

governments. The problem of weak systems and guidelines is compounded by the little incentive that hospital managers and frontline workers have to carry out the AWP process and implement it (7.2.4). The dominance of the budgeting process and neglect of the AWP process means that hospitals focus on short term operational goals rather than long term strategic goals. This observation is an emergent property of the hospitals in response to resource scarcity and mirrors observations in other settings. For example, in a hospital in Canada, it was reported that decision makers often focused on operational issues rather than strategic goals due to budget pressures (Martin, Shulman, et al. 2003).

A second observation of the weakness of the tangible software of systems and procedures is the lack of clarity about the roles and composition of the different decision making organs in the case study hospitals (6.2.2). The absence of official guidelines from the MOH on the composition and roles of these committees meant that hospitals have to evolve their own rules which are clearly different between the case study hospitals. The emergent roles within each hospital have influenced the relationships among actors by altering their power relations (8.2). Hospital B is seen to adopt a more inclusive approach to decision making compared to hospital A. This was seen to result in feelings of unfairness, lack of transparency and reduced trust between senior and middle level managers in Hospital A and is a manifestation of the interaction between the tangible software of systems and procedures and the intangible software of relationships among agents within the complex hospital system (4.2.4). The importance of clarifying roles of decision making bodies has been highlighted in priority setting literature. For example Gibson et al (2004), based on workshops to assist board members and senior managers to develop fair priority setting processes in three healthcare organizations in Canada identified the need to clarify explicitly and upfront the specific responsibilities of decision making groups in relation to the priority setting process.

A third observation concerns the appropriateness of the criteria used to set priorities. It has been pointed out in literature that criteria used to set healthcare priorities should be clearly defined and understood by stakeholders and decision-makers (Gibson et al. 2004). In both case study hospitals, there is no clearly defined priority setting criteria (6.2-6.4). In line with observations from other settings, both formal and informal criteria are used to make decisions across both case study hospitals (3.2). The dominant criteria used to set priorities in both case study hospitals is the revenue generating potential of the department. As will be discussed in section 10.2.2 and 10.2.3, this phenomenon has significant influence on the process and outcome of priority setting processes in the case study hospitals and is an example of the emergent property of the hospital system consistent with CAS. This finding is however contrary to findings in other settings were *health need* emerged as the most commonly used criterion for setting priorities in hospitals

(Barasa et al. 2014). Need was variously defined but generally interpreted as the prevalence or disease burden among patients in the hospitals catchment area and included current demand for health services, which could be measured on the basis of utilization rates and waiting list data (Gibson et al. 2004).

The use of informal criteria to set priorities also stands out as an area of concern (6.2). While this observation was more prominent in Hospital A, it was minimized in hospital B largely because of the leadership style of the hospital superintendent (10.3.2). The use of informal criteria to set hospital priorities is consistent with findings in a number of settings. For example, in a case study of priority setting practice in a hospital in Argentina, it was reported that decisions were made based on, among others, personal relationships and mutual benefit (Gordon et al. 2009). Also, a case study of a hospital in Uganda reported that departments whose leaders knew how to "lobby", "make noise", "quickly use up their resources", "make their case" are usually prioritized (Kapiriri & Martin 2006). In these settings, it was reported that the absence of data led to the use of informal or arbitrary considerations in decision making (Gordon et al. 2009). While this is also true of the case study hospitals, it also emerged that multiple additional factors have led to the use of informal criteria including the absence of explicit guidelines to guide priority setting and resource scarcity (see 10.2.2). As will be discussed in section 10.3.3, the use of informal criteria has affected the relationships between different actors and is another example of the interactions between tangible and intangible software in the hospital systems. In the next sub-section, I will discuss the findings on the influence of contextual factors on hospital priority setting processes.

10. 2.2 The Influence of Contextual Factors on Priority Setting Practice in Public Hospitals in Kenya

The examination of the influence of contextual factors on priority setting practices paints a picture of the case study hospitals as dynamic systems whose characteristics can be explained as non-linear emergent properties in response to environmental phenomena (Health Foundation 2010). One of the key findings of these interactions is the important role that hospital financing and level of resourcing affects priority setting practice in the case study hospitals. Findings from the case study hospitals suggest that these aspects of organizational hardware and tangible software are closely linked and their interactions have significant influence on the organization's intangible software of actor relationships, values and norms. Against a background of scarce, unreliable and unpredictable supply of resources, both case study hospitals have self-adjusted into organizations with a number of undesirable emergent properties. What has been called here a "government culture" is thus an emergent property of the hospital system as an

adaptation to, among others, severe resource scarcity. Linked to resource scarcity, is the over-reliance on user fee revenues by both hospitals (7.2.4). The interaction between resource scarcity and over-reliance on user fees has contributed to the evolution of public hospitals into revenue maximizers. This emergent property of the hospital, while motivated by the desire for survival by the hospital, has led to unintended consequences, where high revenue generating departments preferentially received resource allocations compared to low revenue generating departments (7.2.4). This consequence was unintended and sometimes as a result of national policies whose intentions are the exact opposite (7.2.4). This highlights the complex interactions among factors and agents within the hospitals sub-system and between the hospitals and the larger health system in which they are embedded and the unpredictability of actions consistent with CAS (Schneider & Somers 2006; Ellis et al. 2011; Health Foundation 2010). It is clear that an alteration on one part of the system results in somewhat amplified effects on another part of the system.

Another contextual issue that interacted with priority setting in interesting ways is the state of leadership in the case study hospitals. The role of leadership in promoting the success of priority setting practices in hospitals has been highlighted in a number of settings. For example, in a survey of hospital Chief Executive Officers (CEOs) in Canada on the role of leadership in priority setting, leaders were expected to foster goals and a vision for the hospital; create alignment between goals, vision, resources and skills, actors and processes; develop and maintain relationships among actors; embody and promote desired values and establish an effective process for priority setting (Reeleder et al. 2006). It has also been pointed out by hospital board members and senior managers in Canadian hospitals that a key part of strengthening institutional capacity for priority setting decision-making is supporting leadership development to strengthen institutional capacity for priority setting decision-making (Gibson et al. 2004). Further, when hospital decision makers were asked about the fairness of priority setting in their institutions, leadership was highlighted among the factors that contribute to fair priority setting (Reeleder et al. 2005). The role of leadership is seen to be particularly important in promoting fairness in priority setting. For example, a key feature of case studies of priority setting practices which employ the accountability for reasonableness framework highlight the role of leadership in aligning health care organizations with principles of fairness espoused by this framework (Bell et al. 2004; Madden et al. 2005; Reeleder et al. 2005; Kapiriri & Martin 2006; Kapiriri et al. 2007; Gordon et al. 2009; Valdebenito et al. 2009). Further, one of the recommendations that came out of a case study of hospital priority setting in Chile was that hospital leadership should be strengthened to ensure that all resource allocation decisions made within the hospital involve all relevant stakeholders, are based on relevant rationales,

publicize both decisions and reasons behind them and provide mechanisms for appealing decisions (Valdebenito et al. 2009).

One of the outstanding features of these observations and recommendations about the roles and importance of leadership in priority setting is the prominence of "soft" leadership skills over and above "hard" leadership skills. "Hard" leadership skills refer to professional knowledge, tools, or techniques that allow leaders to discharge their duties. These include planning, resource management, monitoring and evaluation and providing a vision for the organization (Nye 2006). Soft skills include a collection of social, communication, and self-management behaviors. These include skills such as relationship management, motivating people, influencing perceptions and emotional intelligence (Nye 2006). These skills have also been categorized into three types of intelligence namely cognitive, social and emotional intelligence (Daire et al. 2014; Boyatzis 2008; Hogan & Kaiser 2005). Cognitive intelligence is similar to what I have called "hard skills", while emotional and social intelligence refer to "soft skills". As it will become clear in this discussion, the soft skills of hospital managers play a critical role in influencing priority setting practices in case study hospitals. The cognitive (or hard) leadership skills can be mapped to the tangible software of organizational systems while the emotional and social (or soft skills) can be mapped to the intangible software.

It is evident from chapter 7 (7.3) that the differences in leadership between the two case study hospitals lay in soft rather than hard leadership skills. On the one hand, the leader in hospital B has better developed soft skills; she is self-motivated, has the ability to interact better and network with staff, develop trust and manage conflict (Daire et al. 2014). On the other hand the leader in hospital A lacks these skills, or at least is not always available to exercise them. This resulted in undesired consequences in hospital A (7.3) and underlies the importance of developing and nurturing soft leadership skills, beyond the hard skills. This is especially important given the observations in literature that often attention is given to hard skills while neglecting soft skills in leadership development initiatives (Daire et al. 2014; Gilson et al. 2014).

An important consideration in thinking about the type of leadership competencies that would be required in these hospitals is to appreciate that they are complex adaptive healthcare organizations. It has been recognized that meeting the challenges in leading complex adaptive healthcare organizations requires additional competencies, which have been referred to as complex leadership (Ford 2009; Marion & Uhl-Bienb 2001; Uhl-Bien et al. 2007). CAS exist in dynamic states with multiple interacting agents, have enmeshed and complicated relationship between these agents, exhibit emergence and self-organizing

behavior and have unpredictable futures (4.2.4). *Complex leadership* recognizes these characteristics and leverages them to promote organizational effectiveness (Uhl-Bien et al. 2007). Complexity leadership theory encourages a recognition of the dynamic capabilities of CAS by focusing on identifying and exploring the strategies and behaviors that foster organizational and subunit creativity, learning, and adaptability, when appropriate CAS dynamics are enabled within contexts of hierarchical coordination (bureaucracy) (Uhl-Bien et al. 2007). This type of leadership cannot be based on controlling the future because the dynamic and interdependent interactions of system components typically results in unanticipated outcomes. Complex leadership therefore requires the ability to foster conditions that encourage the emergence of productive futures (Ford 2009). Ford (2009) and Marion and Uhl-Bienb (2001) have suggested competencies required for complex leadership. This competency framework sees the leadership role changing from "providing answers" and providing too much direction to creating the conditions in which followers' behaviors can work through inherent tensions and produce structure and innovation (Ford 2009). Complex leaders are thought to need competencies in initiating three fundamental activities that enable managing turbulence in a non-equilibrium environment: 1) how to foster network construction; leaders in complex organizations are expected to build and foster network relations among agents in the system from the frontline, through the middle to the top of the organization (2) how to plant seeds to catalyze emergence from the bottom-up; leaders are expected to encourage communication and interactions among agents in the system and engage in collective and creative problem solving and (3) how to nurture systemic thinking; complex leaders should learn to see and approach leadership issues by seeing the systemic whole rather than isolated and independent components (Ford 2009; Marion & Uhl-Bienb 2001; Uhl-Bien et al. 2007).

Complex leadership ideas have been employed to explain and examine leadership in complex healthcare organizations. For example, Ford et al (2009) examined the performance of three successive CEOs of a hospital in the US and reported that the two latter CEOs were successful in improving hospital effectiveness compared to the former CEO because they applied ideas of complex leadership. Gilson et al (2014) in their examination of the challenges to strengthening primary healthcare (PHC) in the South African health system make observations and recommendations that resonate with *complex leadership* ideas. They see the agents in CAS as *sense makers* where *sense making* is understood to be the process individuals undertake to try to understand what is going on around them, as they try to make sense of events and experiences (Gilson et al. 2014). Because these agents are interconnected and interdependent, their interactions results in emergence of shared interpretations and patterns of collective behavior (Gilson et al. 2014; Morgan 2005). They propose that leadership in CAS needs to mediate *sense making* and

support changes in the shared interpretations and patterns of behavior and action (Meadows 2008; Kim 1999; Gilson et al. 2014). In essence, leaders need to foster productive emergence.

The autonomy that hospitals have over priority setting decisions (decision space) is another contextual issue that influenced priority setting practices in both case study hospitals. The influence of hospital autonomy is an example of the interactions between a CAS and the larger system in which it is embedded. One of the key findings on this relationship is that managers in both hospitals feel that they have little influence over the AWP process. In this tension between central MOH and hospitals, the balance of power is in favor of the former, given their key role in hospitals not only in hospital financing, but also governance. This "unwanted" influence over hospital planning is shown in both case study hospitals to, among others, lead to the emergence of the culture of "feigned compliance" and "government culture". Findings similar to feigned compliance have been document in the United Kingdom, where, after the introduction of an audit system for medical consultants, it was reported that professionals "played tick-box games' to give the impression of auditable practice while continuing to practice in a more traditional way (McGivern & Ferlie 2007). This has also been described as "mock bureaucracy", a phenomenon where both managers and subordinates in an organization comply with bureaucratic procedures, that do not seem relevant to them, on paper, but in practice, operate differently (McGivern & Ferlie 2007).

It was also shown that the limited autonomy hospitals have over decisions on the range of medicines that could be procured centrally contributed to the reliance of hospitals on user fees given that this affords them greater autonomy of medicines selection for procurement from local suppliers. As discussed previously, this reliance on user fees has unintended and unwanted consequences by transforming hospitals into "revenue maximizers". The lowest decision space is experienced in the nursing allocation process, a scenario that contributed to the high nursing staff turnover (7.4).

Literature suggests that decision space for hospital level priority setting is influenced by the structure of the health system and the nature of the priority setting activity. For example, in countries such as Canada and Norway where the health system is significantly decentralized, hospitals have greater decision making latitude (Kapiriri et al. 2007) while in Chile, a country with a less decentralized health system, priority setting at the hospital level is predominantly guided by national decisions with little discretion at the hospital level (Valdebenito et al. 2009).

At the time of collecting data for this thesis, Kenya operated under a unitary system of government with significant central government control. The health sector was however decentralized to some extent.

Public hospitals operated under a hybrid governance system with significant control from central government over resources allocated centrally including human resources, essential supplies and budgetary monetary allocations, and some level of flexibility over resources generated locally through user fee charges. It is clear from the findings of this thesis that while the hospitals enjoyed some level of flexibility under this arrangement, the fact that a significant proportion of their resources were controlled by the central government meant that overall hospitals had insufficient decision space to adequately function. At the time of writing the thesis, Kenya had transitioned into a devolved system of government, with significant powers transferred to the counties. Anecdotal evidence suggests that county governments are "re-centralizing" hospitals at the local level, taking up most decision making roles. For example, at the time of collecting data for this study, hospitals collected user fee revenues and banked them in their own bank accounts, and hence had direct access and control over resources collected locally. Currently, hospitals are required to bank user fee revenues to a county treasury bank account (where hospitals are not signatories) with the counties having the discretion of reallocating these revenues to other sectors based on their priorities. Also previously, public hospitals were allowed to tender and procure commodities on their own to supplement central government supplies. Currently this function has been taken up by the county governments. In the current governance arrangement therefore, hospitals have significantly lost their autonomy. What this means is that while in the previous governance arrangements hospitals had limited decision space, it is likely that this situation has been made worse. It is clear that county governments need to reconsider the decision to recentralize hospitals, given the findings of this thesis. In the next sub-section, findings on the role of actor and power relations will be discussed.

10. 2.3 The Influence of Actor and Power Relations on Priority Setting Practices in Public Hospitals in Kenya

From literature, it appears that the relevant set of actors for hospital priority setting processes include hospital managers, frontline staff, the public and/or users of healthcare services (3.2). The interactions between actors in the case study hospitals and the micro-practices of power are seen to have significant influence on priority setting practices (8.2). This resonates with the political frame, which views organizations as roiling arenas, hosting ongoing contests of individual and group interests (Bolman & Deal 2013). As arenas, hospitals as organizations are seen to house contests among actors with competing interests and values.

One of the key findings that differentiated the case study hospitals was the power relationship between senior and middle level managers. Power differences between senior and middle level managers are seen

to be pronounced in hospital A compared to hospital B. Emergent properties include a sense of distrust among managers and frontline workers, perceptions of lack of transparency and unfairness. This is seen to contribute to the observed low motivation and a sense of apathy towards priority setting activities, what I have termed here a "government culture". The "government culture" among middle level managers is seen to impact negatively on priority setting process, given the recognized role of middle level managers in organizational functioning (Huy 2011; Balogun 2003; Balogun 2006). The fact that leadership has an important role to play in managing relationships is highlighted by the observation that potential tensions between managers in hospital B were managed by the hospital medical superintendent (8.2). This observation is best emphasized by a quote from Bolman and Deal (2013) thus:

"Organizational excellence demands a sophisticated type of social skill: a leadership skill that can mobilize people and accomplish important objectives despite dozens of obstacles; a skill that can pull people together for meaningful purposes despite the thousands of forces that push us apart; a skill that can keep our corporations and public institutions from descending into a mediocrity characterized by bureaucratic infighting, parochial politics, and vicious power struggles"

It is also clear from findings in the case study hospitals that relationships between actors in an organization are a major determinant of organizational capacity to function. Power differences and micro-practices of power within organizations is something that needs to be managed appropriately to enable the functioning of organizations (Gibson et al. 2005).

Another key finding in both case study hospitals is that there seems to be tension between non-clinician hospital managers on the one hand and clinicians (both managers and frontline staff) on the other (8.3). While a number of factors could explain this, and were presented in chapter 8, worth mentioning here is the role of professional identity, professional autonomy and conflicting values. Clinicians in both hospitals do not seem to attach priority to administrative functions but rather identified themselves more with their clinical roles. Even though they pointed out that they are excluded from priority setting activities, they do not really seem to mind it. It appears that the professional identities they have developed attached little importance to their involvement in priority setting activities. Specifically for clinician managers, this resonates with findings in other settings on identity challenges of "hybrid managers" (clinicians who take on managerial roles) (McGivern et al. 2015). This is perhaps linked to the fact that medical education in Kenya, where most of the clinicians are trained emphasized their clinical skills and hardly included administrative skills, while their professional socialization after medical school places more importance on clinical competencies and does not seem to recognize

management competencies. Choosing a management rather than a clinical path is therefore considered less prestigious. The fact that clinicians thought however, that they are the ones who know what is best in healthcare matters has put them at cross roads with non-clinician hospital managers (8.3). Clinicians in the hospital are also seen to operate under a *"medical-individualistic"* model where priority is given to individual patient needs while hospital managers are seen to operate under the "*fiscal-managerial"* model where concern is placed on financial sustainability and measures to enhance this such as cost containment (Greer 1985). While these two values are in conflict, the fact that clinicians do not participate in priority setting activities means that managerial values dominate in decision making. This, as has been discussed in chapter nine, contributed to the emergence of the revenue – maximization behavior of hospitals.

Tensions between clinicians and hospital managers is a recurrent theme in studies of healthcare organizations (Waldman & Cohn 2008; Matheson & Kissoon 2006; Burns et al. 1993; Freidson 1985). Specifically on priority setting, it has been reported in other settings that physicians were marginally involved in priority setting practices. For example, in a study of priority setting in a Ugandan hospital, it was reported that the process was dominated by hospital managers, with minimal involvement of frontline practitioners (Kapiriri & Martin 2006; Kapiriri et al. 2007). Power struggles between practitioners and managers who were reluctant to share decision-making power, and frustration by practitioners when their concerns were not addressed, are reported to contribute to the non-participation of practitioners (Kapiriri & Martin 2006). The conflict of values between clinicians and managers in hospital priority setting processes has also been documented. While clinicians, who subscribe to the 'medical individualistic' decision system, were concerned with individual patient outcomes, administrators/managers, who subscribe to the 'fiscal managerial' decision system, were concerned with the implications of decisions on the budget (Danjoux et al. 2007; Gordon et al. 2009). This conflict was more evident in scenarios where decisions affected identifiable patients such as medicines selection processes (Gallego et al. 2007).

Power relationships are also seen to play out at the interface between the hospital managers and the community (8.4). Literature suggests that the power difference observed at the interface between the community and the hospital in the case study hospitals is similar to other settings. Like the case study hospitals, community involvement was in theory effected through representation in hospital management boards (Kapiriri & Martin 2006; Kapiriri et al. 2007). There are however reported cases of other mechanisms of eliciting community views for priority setting in hospitals. For example a case study of priority setting in a Women's and Children's hospital in Adelaide Australia reported the use of community surveys to obtain community views to be incorporated in hospital priority setting decisions

(Astley & Wake-Dyster 2001). The reasons given for the minimal involvement of the community were similar to those given by hospital managers in the case study hospitals (Martin, Hollenberg, et al. 2003).

From the foregoing, priority setting practices are seen to be complex, and occurring in complex systems with significant influence from contextual factors and actor relations. The examination of priority setting practices in the case study hospitals reveals a number of properties of the hospital systems which can be grouped in to hardware and software (both tangible and intangible) issues. It is evident that whereas systems hardware aspects are important and need to be strengthened, software issues are equally important and need to be strengthened as well. This finding mirrors findings in other settings. Sheikh et al (2011) opined that system software aspects are critical to health systems performance while Elloker et al (2012), in examining the complexities of managing a sub-district health system in Cape Town, South Africa, observed that the intangible components of systems software are key in shaping the behaviours of workers in an organization and underpin the organizations power to perform. The importance of software components of health systems has also been highlighted in the 2011 publication Good Health at Low Cost – 25 years on (Balabanova et al. 2011). In this report, an analysis of the health systems of Bangladesh, Ethiopia, Kyrgyzstan, Tamil Nadu (India), and Thailand revealed that they achieved better health outcomes compared to neighboring countries despite relative similar hardware aspects of health systems such as level of resources (Balabanova et al. 2011). It was found that beyond hardware issues, software aspects such as leadership and vision were important in sustaining health systems that promote good health at low cost (Balabanova et al. 2011). Efforts to improve priority setting practices in the case study hospitals should therefore focus not just on hardware issues such as resource availability, but also on both tangible and intangible software aspects of complex hospital systems.

The next sub-section discusses findings on evaluation of priority setting practices in the case study hospitals.

10. 2.4 Evaluation of Priority Setting Practice in Public Hospitals in Kenya

One of the key objectives of this thesis was to evaluate priority setting practices in the case study hospitals. To do this I developed a framework for the evaluation of priority setting which is presented in the literature review chapter (3.3) of this thesis. In applying this framework to evaluate priority setting practice in the case study hospitals (chapter 9), a number of key issues emerge. First, it is evident that there is no systematic and effective mechanism to elicit and incorporate community values in priority setting activities in the case study hospital. The community is not however expected to make technical decisions about healthcare rationing such as for example the choice of medicine to be included in the

medicine formulary for the management of a specific disease. Rather communities should have the opportunity to influence the guiding principles of priority setting. For example, community members can contribute to debate about the rationales that are used to set healthcare priorities (Mooney 1998; Cleary et al. 2011). Here the society's role is seen as that of setting the principles on which to base priority setting decisions. Society can also be consulted on the characteristics of people or patient groups that justify additional claims to healthcare (Black & Mooney 2002). That is, society can help define what equitable allocation of healthcare resources means in their context. It has been argued that communities are well placed to foster ideas about what is equitable, about who shall have access to health care and to what extent (Black & Mooney 2002). Communitarianism therefore does not propose the replacement of technocrats but rather that the community should be provided with an opportunity to establish the value base for healthcare decision making (Cleary et al. 2011; Black & Mooney 2002; Mooney 1998).

Approaches used to involve the community in the case study hospitals, namely, suggestion boxes and membership in hospital oversight committees are shown to be ineffective and lack the capacity to empower the community to effectively engage in the priority setting processes. If we accept the idea of hospitals as social institution, which I certainly do, then the lack of a mechanism to incorporate community values begs the question of the legitimacy and responsiveness of the hospital priority setting processes. A number of reasons contribute to these observations including the fact that there are no clear guidelines, systems or mechanisms specifically aimed at harnessing community values. Further, the power relations at the interface between hospital managers and the community were such that the community was not empowered to engage with the hospital (8.4). Here we again see an example of the interactions between hospital tangible software of guidelines and systems and intangible software of actor relations.

Second, even though "sophisticated" economic methods such as CEA and PBMA are not used by the case study hospitals, there is an attempt to incorporate economic considerations by using the affordability criteria. The use of CEA and PBMA was hampered by a lack of both technical capacity and reliable data. This finding is not dissimilar to findings in other settings. It has generally been observed that the incorporation of economic criteria in priority setting is not very common (Hauck et al. 2004). Perhaps a more practical approach for hospitals, and certainly those in developing countries like Kenya, is to incorporate economic criteria by use of more feasible methods such as considering affordability alongside effectiveness and conducting budget impact analyses. Apart from capacity challenges however, ethical opposition to an economic approach to priority setting has been documented (2.2.2). It was not possible to determine however whether actors in the case study hospitals share these ethical concerns given that they

had not been previously exposed and did not have an understanding of these methods. Further, while equity was a concept that hospital actors related to, there seems to be no systematic attempt to incorporate it. So for example, while the adoption of a revenue maximizing model is at odds with equity principles, the use of "rule of rescue" perhaps points at attempts to achieve some equity by prioritizing the worst off. Also, while revenue maximization resulted in perceived inequitable allocation of resources, it is perhaps justified by the fact that it enabled the hospitals to continue to run and hence to continue to provide services. In the face of severe resource scarcity and over reliance on user fees, investing more resources in revenue generating departments and services was the rational choice given that it resulted in continued revenue generation that enabled the hospitals to continue running. What is perhaps unacceptable is the fact that some departments did not receive allocations at all.

While hospital managers thought both equity and efficiency were useful concepts to incorporate in priority setting, it was evident that the hospitals did not have a system with explicit priority setting criteria, where for example such principles would feature among others. This was therefore another weakness of the organizational tangible software.

Third, evaluating priority setting practices in the case study hospitals against the procedural requirements of the evaluative framework reveals that there is scope for improvement of priority setting process to promote fairness and legitimacy. Procedural requirements speak to the politics of priority setting process, and in this thesis, have been grounded on deliberative democracy (Abelson et al. 2003; Chambers 2003). A number of procedural frameworks have been drawn from deliberative democratic principles with the dominant one in healthcare priority setting being Accountability for Reasonableness (Rid 2009; Daniels 2008). Discussed in chapter 3 (3.3.2), AFR is an ethical priority setting framework grounded on principles of deliberative democracy. This framework specifies that priority setting processes should meet the criteria for relevance, publicity, appeals and revisions, and enforcement. This framework has been applied in a number of settings and has been relatively well received. A shortcoming of this framework, common with other deliberative democratic frameworks, is the lack of considerations of power differences among actors (Friedman 2008; Abelson et al. 2003). So while a deliberative process might include the relevant range of stakeholders, an equally important consideration is whether or not the range of stakeholders are empowered to effectively contribute to decision making (Shayo et al. 2013) . The general observation in the case study hospitals is that priority setting practices do not include the relevant range of stakeholders with notable exclusions in both hospitals being frontline clinicians and the public. Further in hospital A, middle level managers are also excluded from hospital decision making. Closely related to this, a range of actors appear to be less empowered to contribute to decision making namely the community and frontline

clinicians in both case study hospitals and additionally middle level managers in hospital B. As discussed earlier, this exclusion is a function of unclear or sometimes lacking guidelines and systems and also of micro-practices of power among hospital actors. The role of leadership in ensuring decision making processes are inclusive and deliberative has also been highlighted (10.2.2). Transparency is also seen to be a sticky issue in both hospitals with perceptions of lack of transparency being worse in hospital A. Lack of understanding of priority setting processes, poor communication and exclusion of some stakeholders is seen to contribute to perceptions of lack of transparency. Further, both facilities do not use evidence to make decisions but rather rely on personal experience and hunches. Consistent with findings in most settings, there is no formal process for revisions. The most rigid priority setting process is the budgeting and planning process which cannot be revised either formally or informally. Less formal priority setting processes such as the medicines selection and nursing allocation process have the provision for revisions through informal processes.

Closely linked to procedural conditions are the intermediate results of priority setting processes. Stakeholders in hospital B are more satisfied and better understand priority setting processes compared to hospital A because the process in the latter is more inclusive and deliberative, eliciting perceptions of transparency and fairness. Also the fact that stakeholders are included in hospital B makes them appreciate the reality of resource scarcity which in turn results in their being more understanding of the situation. In both hospitals however, priority setting does not lead to shifted resources due to the fact that hospitals rely on historical allocations. Last but not least, the implementation of priority setting in both case study hospitals is not satisfactory. As discussed in chapter 9, this is as a result of a number of factors including resource scarcity, lack of effective accountability mechanisms, and two prominent cultures in both case study hospitals, government culture and feigned compliance. Having discussed the findings from this research, the next section seeks to present some of the policy and research implication arising from this research.

10.3 POLICY AND RESEARCH IMPLICATIONS

10. 3.1 Policy Implications

This section endeavors to distil and expound on the policy implications arising from the findings of this study. From the findings and discussion sections, it became clear that there is enormous scope to improve the organizational capacity of the case study hospitals for successful priority setting. Adapting the Aragon framework, the capacity of these hospitals could be improved across the interacting and interrelated aspects of organizational hardware, tangible and intangible software (Aragón & Giles Macedo 2010;

Elloker et al. 2012). Efforts to improve priority setting should however be informed by the recognition that hospitals are complex adaptive systems. Rather than seeking to rectify isolated aspects of the system, efforts should take cognizance of the interrelationships between various system components and hence endeavor to create the necessary conditions for the emergence of desired behaviors and properties (Ford 2009; Marion & Bacon 2000).

One of the key weaknesses that emerged from the findings is the low level of resourcing of both case study hospitals, an aspect of the hospital system hardware. The case study hospitals are significantly underfunded in terms of funds for recurrent and capital expenditures, human resources and essential supplies (pharmaceuticals and non-pharmaceuticals). The finding of poor resourcing of the case study hospitals mirrors reports of the situation of hospitals in Kenya generally (Appendix XX). It is imperative that policy makers think and implement sustainable mechanisms for increasing the level of resources for public hospitals in Kenya. To adequately address the issue, and design appropriate mechanisms, a comprehensive assessment of the resource needs of these hospitals would be needed. While there are a number of mechanisms, both supply side, demand side or combinations (in various shades), determining which mechanism is best was not part of the objectives of this study. For example on the supply side, both national and county governments should prioritize and increase investments in hospitals both in terms of budgets for recurrent and capital expenditures, supply of pharmaceuticals and non-pharmaceuticals and increasing recruitment of and deployment of human resources for health. On the demand side, both national and county governments should put in place measures for scaling up prepayment mechanisms such as social health insurance to increase the ability of potential users of public hospitals to pay for services received. Health insurance coverage of the Kenyan population is estimated at only 20%, with the National Hospital Insurance Fund (NHIF) being the major insurer (18% of the Kenyan population) (Ministry of Medical Services 2012). While the majority of the population have no health insurance and hence have to pay their medical bills from out of pocket expenditures, those with an NHIF cover (this is the only form of insurance accepted by public hospitals) also still have to meet a major portion of their healthcare costs from out of pocket expenditure given that the NHIF provides a very shallow benefit package (inpatient cover only). Reforming health insurance would therefore require both increasing population coverage and the range of services covered.

Another area that requires attention in public hospitals in Kenya is the organizational systems software of 1) leadership and management capacity and 2) organizational systems and procedures. As concerns leadership and management capacity, it emerged in chapter 7 that hospital managers have limited knowledge and skills in planning and budgeting. These hard skills have also been referred to as cognitive

leadership and management skills (Daire et al. 2014) and are part of the hospital tangible software (4.2.3). While they had received technical training in their professional training, the Kenyan education system (where most of them had been trained) did not equip them with management and leadership skills. Further, in-service management and leadership trainings have been done to only a few (mostly senior) managers leaving the rest of the managers to learn on the job by doing. There is therefore a need to invest in developing the leadership and management capacities of hospital leaders. To improve the capacity of hospital managers to manage and lead their organizations, policy makers should invest in training programmes that will equip these managers with the required skills and scale up these sorts of training to cover a critical mass of the target group. Specifically for priority setting, skills such as budgeting, operational and strategic planning, the application of priority setting tools and techniques would be essential skills to impart to hospital managers. More importantly, academic institutions of higher learning should introduce and integrate leadership and management training to pre-service health workers. This will not only increase their competence in this much needed skills, but also perhaps influence their professional identities to attach importance to management and leadership roles.

A critical point to highlight is the fact that beyond the "hard" management and leadership skills, training of hospital managers should also strive to impart and cultivate "soft skills". In other words, efforts should be directed at strengthening aspects of hospital organizations intangible software in addition to the tangible software. These include such skills as the ability to mentor and motivate staff, awareness and appreciation of deliberative processes, the ability to manage relationships and building trust among actors especially within the context of a conflict prone dynamic hospital system. It has been highlighted in literature (Daire et al. 2014), and is certainly evident in the findings of this thesis that "soft" leadership skills are very important in organizational functioning. Unlike hard or cognitive leadership competencies, it is unlikely that soft skills will be developed in managers by the formal "classroom type" leadership and management trainings (Daire et al. 2014). Rather, these skills can perhaps be developed by action or collaborative learning (Daire et al. 2014; Lave & Wenger 1991; Dorros 2006). Action learning combines formal training with on the job mentoring and employs assignments and reflections from work experiences to achieve learning (Pedler 1991). In this approach, learning is not transmitted from teacher to student but rather co-produced by the interactions and engagements between the facilitators and the leaders with real life situation. There are still questions however about the scalability of such initiatives (Daire et al. 2014).

It is also important for leadership development efforts to recognize that hospitals are CASs requiring complex leadership competencies (10.2.2). Complex leadership entails focusing efforts on behaviors that

enable organizational effectiveness, as opposed to determining or guiding effectiveness (Ford 2009; Marion & Uhl-Bienb 2001). Complex leaders foster conditions that enable desirable emergent, but largely unspecified, future states (Ford 2009; Marion & Bacon 2000). These leaders feed the natural, bottom-up dynamics of emergence, innovation, and fitness (Ford 2009; Marion & Uhl-Bienb 2001). They also need to think broadly in terms of systems, of non-linear effects, and of network forces (Ford 2009; Marion & Uhl-Bienb 2001). These Leaders need to understand the patterns of complexity and learn to manipulate the situations of complexity more than its results (Ford 2009; Marion & Uhl-Bienb 2001).

To improve the commitment and performance of hospital managers, measures should also be taken to motivate them. From the findings of this study, it appears that one of the measures to ensure this would be to increase the autonomy of managers by allowing them to choose whether or not they want to be hospital managers. Forcing health workers to be managers was seen to result in lack of commitment and motivation to their roles. Also, health workers who choose to take on managerial responsibilities should be recognized and compensated for this. For example, managers could get a responsibility or administrative allowance. It has been shown in other setting that recognition improves the motivation levels of workers (Dieleman & Harnmeijer 2006; Häggström et al. 2008). Specifically for the medical superintendent, it was clear that in order for them to effectively discharge their duties, they had to be relieved off some or all of their clinical responsibilities. Expecting managers to continue to perform all of their previous clinical duties after taking up management responsibilities is clearly not feasible.

There is also considerable scope in improving the systems and procedures of public hospitals. First, the financing arrangements for public hospitals should provide a significant level of autonomy to hospital managers to allow them to deliver on their functions effectively. This is especially critical in this transition phase where the health sector is reorganizing to align itself with the new devolved system of government and county governments are setting up mechanisms for governing the health sector in the areas of their jurisdiction. Ironically, whereas one would expect that devolution would result in greater autonomy at the local level, anecdotal evidence reveals that county governments are taking up most of the functions previously carried out by hospitals and hence in effect reducing their autonomy. It has been observed that increased decision space is associated with increased efficiency, quality of services and the promotion of democracy and accountability at the local levels (Bossert 1998; Atkinson et al. 2000). It is imperative that policy makers at the county government level re-think their approach to governing hospitals and give hospitals autonomy over resources to enable them to effectively function.

Second, it is important that an explicit process is put in place for the major priority setting activities. Such a system should clearly outline the various roles and responsibility of decision making bodies in the hospital and the constitution of these bodies. The clarity of roles of decision making bodies and committees in health facilities has been shown to be an important determinant of their functioning not just by the empirical findings of this study but also in literature (McCoy et al. 2012). Strengthening the process of priority setting in the hospitals should also involve putting in place a mechanism that promotes fairness and legitimacy. From literature, it has been argued severely that to ensure this, greater emphasis will need to be put into the process of priority setting to ensure that they espouse the ideals of deliberative democracy (Rid 2009; Abelson et al. 2003; Martin et al. 2002; Ham & Glenn 2003; Daniels 2008). Such a system would ensure that the relevant range of stakeholders are included in decision making processes. These include hospital managers (both senior and middle level), frontline staff and the community at the very least. To ensure this for example, there should be clear guidelines that specify that decision making committees should have representatives from these stakeholders. Deliberative processes that involve the relevant range of stakeholders should not be put in place for the budgeting and planning process only, but also the other major priority setting processes such as the medicines selection process and the nursing allocation process.

For the medicines selection process, there is scope in strengthening the MTCs since they could offer a useful forum for deliberation on medicines formulary decisions. Further, findings from this thesis revealed that the most undemocratic process in the hospital was the nursing allocation process. To promote fairness and legitimacy, this decision process should also involve the relevant range of stakeholders. This could perhaps be achieved by giving this responsibility to the HMTs rather than leaving it for the hospital nursing officers in charge to make unilateral decisions.

The involvement of the community should however be qualified here. The intention of this proposal is not to have community members involved in every single decision making process in the hospital. Indeed as has been observed, given that some decisions require a high level of technical knowledge, it is unlikely that lay people could effectively participate. These include for example the medicines selection process. In line with the recommendations of the communitarian claims school of thought, the community should be engaged to determine the values or "meta-principles" that they would like hospital priority setting processes to be based on (Mooney 2005; Mooney 2009). Experts (hospital managers and front line staff) would then be left to make the day to day technical decision (Mooney 2005; Mooney 2009).

The proposal for the involvement of the community is however not a new thing in Kenya. Far from that, the new Kenyan constitution specifically requires that decision making at both the national and county levels involve and engage the public for their inputs (GOK 2010). Public budgeting processes at both these levels are for example required to organize public forums to share and debate proposals before finalization of budgets (Appendix XXI). Extending this practice to health sector priority setting therefore has a precedent from public finance practice in Kenya. A feasible strategy would perhaps be to integrate hospital public engagement initiatives with those of the county rather than having individual hospital initiatives.

While a range of community engagement mechanisms have been discussed and debated in literature (Mitton et al. 2009; Molyneux et al. 2012; Cleary et al. 2013), there is no consensus on how public views should be obtained (Mitton et al. 2009). It has also been argued that the suitability of public engagement mechanisms is highly context dependent and hence likely to vary across settings (Sepehri & Pettigrew 1996). It is therefore impossible for this thesis to recommend any one community engagement mechanism for priority setting in healthcare. I propose however that priority setting activities should incorporate participatory community engagement mechanisms rather than limit themselves to less interactive mechanisms such as one way communication. Examples include the incorporation of community members in hospital planning committees such as the HMT rather than just the oversight committees, the use of citizen juries and citizen panels. Citizen Juries are a group of 12-20 randomly selected citizens, gathered in such a way as to represent a microcosm of their community, who meet to deliberate on a policy question. Typically, they are informed about the issue, are presented with evidence which they cross-examine, discuss among themselves and reach a decision. They have been used in a number of settings to incorporate community views in healthcare priority setting (Lenaghan et al. 1996; Lenaghan 1999). Citizen panels are a randomly selected group of citizens who meet routinely (e.g. four times per year) to consider and discuss issues and make decisions (Abelson et al. 2001). They are typically used to guide health resource allocation decisions and act as "sounding boards" for decision making bodies (Abelson et al. 2001).

A key factor in the successful engagement through these mechanisms is the legitimacy of the representatives of the community. To assure this, the selection of community representatives should be transparent, should involve the community (e.g. though voting) and should ensure diversity reflected in the community. Also, vulnerable groups such as women, the disabled and the poor should be represented.

As the empirical findings have shown however, representation in decision making bodies alone is not enough and there is also need to put in place measures to empower these actors to effectively engage. Deliberative mechanisms must therefore be designed in such a way that they minimize power differentials, promote trust among actors and decision makers and hence empower them to effectively participate in decision making. These include for example giving each stakeholder equal opportunities to participate at different stages of the decision making process such as agenda setting, establishing procedural rules, selecting the information and expertise to inform the process and assessing the validity of claims, clearly defining and enshrining the role of the each stakeholder in priority setting rules and guidelines, ensuring accessibility of relevant information to each stakeholder to reduce information asymmetries and ongoing rather than one off or infrequent engagement of stakeholders since it has been shown that ongoing engagement builds trust over time.

Another important procedural condition for priority setting processes in hospitals is transparency. From the empirical findings, it is clear that one measure that was seen to promote transparency was the inclusion of a wide range of stakeholders in decision making processes. Transparency would also be improved by publicizing of decisions and their rationales and making these decisions accessible to all stakeholders and communicated to them as well. For example, minutes of priority setting meetings should be circulated to all hospital stakeholders. Also, priority setting documents such as AWP, budgets and medicines formularies should be accessible to all stakeholders in the hospital.

Another procedural condition that needs to be incorporated in hospital priority setting processes is the provision of a formal opportunity for the revisions of decisions in light of emerging information/evidence. This flexibility was thought to be important by managers in the case study hospitals, and has also been shown to be important in other setting in literature (Martin et al. 2002; Ham & Glenn 2003). Strengthening the priority setting process in the case study hospitals should also include improving the use of evidence in decision making. Apart from improving the quality of information by for example training of health workers and providing them with information management tools and technologies, changing their culture to appreciate the use of evidence is perhaps more important. For example, priority setting guidelines and processes should require that an initial process of analysis of information/evidence available to them is carried out before decisions are made. It would also require that the basis of decisions (the information/evidence that guided the decisions) be explicitly outlined. Lastly a priority setting process should have a mechanism for ensuring that all these processes are adhered to. Part of the approval processes for decisions such as budgeting and planning or medicines selection should include a requirement of a demonstration that the five procedural conditions have been met. As it has been shown

in other settings, this enforcement mechanism is one of the key roles that leaders should play in hospitals (Reeleder et al. 2005).

10. 3.2 Areas for Further Research

Emerging from the study, a number of issues deserve further investigation. First, one of the key areas of research is the need to explore methods for developing soft leadership and management skills among hospital leaders given the importance of these skills in hospital functioning. While action learning has been proposed as a means to build health managers competencies in soft skills, there is need for work to explore feasible and scalable strategies for implementing this and other potential strategies.

Second, another potential research area is exploring the views and perceptions of health managers and policy makers on the evaluative framework developed and applied in this thesis. Specifically research could explore the acceptability of the different attributes of the evaluation framework and the relative importance of the different attributes. This is especially important given that when decision making is based on multi-criteria approaches, the relative importance of the different attributes makes the trade-offs explicit. Answering these questions would refine the framework and improve its utility as an evaluative tool for healthcare organizations priority setting practices.

Third, while the thesis has proposed and highlighted the importance of basing hospital priority setting decisions on community values, approaches that are both appropriate and feasible in specific contexts remain contested. Future research can focus on testing alternative methods for eliciting community values and comparing their suitability and applicability in public hospitals in Kenya. Such a study would answer questions such as the acceptability, suitability and cost-effectiveness of alternative mechanisms.

Fourth, research should also focus on effective ways of ensuring and promoting empowerment among stakeholders in deliberative processes. As noted in this thesis, and by other authors, power differences between stakeholders often mean that some actors are not empowered to effectively participate in deliberative processes. It has also been shown in other settings that empowerment of stakeholders in deliberative processes is affected by "social stratifiers" such as social-economic status, gender, tribe and education levels (Shayo et al. 2012). These factors are however context specific and should be explored in different settings. More importantly, in light of such influences, there is a need to explore effective ways of promoting empowerment among stakeholders in different contexts.

Fifth, research should also explore the effect of the level of hospital autonomy on hospital priority setting. This is especially so in a context where hospital governance in Kenya is in transition with the likelihood that hospitals will either be more or less autonomous.

10. 4: CHAPTER SUMMARY

This chapter is the last of ten chapters of this thesis. The thesis presents a study of priority setting at the meso level in public hospitals in Kenya, based on a critical examination and evaluation of two case hospitals. This, to my knowledge, is only the second study of hospital level priority setting in an African public hospital, the other one having been conducted in Uganda (Kapiriri & Martin 2006). Given that the Ugandan study was conducted in a national referral hospital, this becomes the first study that offers insight on hospital level priority setting practices in local public hospitals in an African country. Given the dearth of literature on hospital level priority setting practices in hospitals and especially in developing country hospitals, it is anticipated that the findings of this study will add significantly to this body of knowledge (Barasa et al. 2014).

The critical role that public hospitals play in the Kenyan health system has become even more pronounced recently, with the transitioning of the Kenyan system of governance from a unitary (and highly centralized) system of government, to a devolved (and in theory a highly decentralized) system of government (GOK 2010) (1.4). Public hospitals, previously referred to as district hospitals are now county hospitals and are the focal point of county health systems, offering referral care to the population. As county governments set up governance structures for the county health systems, evidence on how hospitals use resources available to them and the factors that influence their resource allocation decisions and processes will be of high utility. For example, county governments will need to determine the degree of autonomy that hospitals will enjoy, financing mechanisms, human resource policies, procurement policies for essential supplies and accountability mechanisms. From the empirical findings of this thesis, these decisions have a significant impact on priority setting processes in hospitals. Findings from this thesis would therefore contribute to the evidence base for the policy formulations.

This thesis was broadly guided by the *"describe-evaluate-improve"* approach proposed by Martin and Singer (2003) on improving priority setting in healthcare organizations (1.2). In contrast with documented case studies of priority setting in hospitals, this thesis went deeper into identifying and critically examining the role and influence of contextual factors in shaping priority setting practices in the case study hospitals. It has also provided an in-depth analysis of the role of actors and power relationships in shaping priority setting practices in hospitals. As noted by Gibson and colleagues, the issue of power

differences among actors have hitherto not been addressed in case studies of healthcare priority setting (Gibson et al. 2005). This is despite observations that priority setting processes are highly political (Ham 1997; Klein 1998). While these factors have not been given much attention in priority setting literature, the empirical findings of this thesis reveal that they do indeed exert significant influence on priority setting practices.

Further, in seeking to evaluate priority setting, this thesis has gone beyond the recommendation for using an ethical framework, most commonly the accountability for reasonableness framework. I developed and applied an integrated evaluative framework that draws from a range of priority setting schools of thought, most notably consequentialist and proceduralist frameworks. This is in line with the recognition of the importance of proposals from these paradigms and calls for integrated approaches (Ham 1997; Norheim et al. 2007). It is therefore also anticipated that this thesis will contribute to the body of knowledge on evaluation of priority setting.

Most significantly, given the generally accepted observation that priority setting is a highly complex and context specific process, this study is the first, to my knowledge, to apply complex adaptive system (CAS) theory to explain findings of priority setting processes in hospitals. This is an important point in the sense that not only are phenomena explained using CAS theory, but also that policy makers interested in improving priority setting processes in hospitals will need to adopt complexity theory approaches. The policy makers and hospital leaders' role is therefore not seen as that of fixing isolated components of the hospital system, but rather as creating conditions necessary to trigger desired emergent properties of the hospital system. Employing systems theory has also enabled the unpacking of the hospital system into hardware and software components and has especially highlighted the critical role that intangible software plays in hospital functioning. Overall therefore it is hoped that this thesis has not only contributed to the body of knowledge on hospital priority setting practices but has also offered an evidence base for policy formulations that will improve how public hospitals allocate and manage resources in Kenya.

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APPENDICES

Appendix I: General Characteristics of the 24 Empirical Hospital Priority Setting Studies included in Review 1 (3.2)

Study	Country	Study design	Study Setting	Priority setting activity	Study objectives
Reeleeder et al 2006	Canada	Qualitative cross sectional study	Forty six hospital in Ontario Canada	Allocation of hospital resources (and budgets) between departments and service areas	To describe the role of leadership in health services priority setting from the perspective of hospital leaders, and provide a set of lessons for effective priority setting practices in health care facilities.
Gibson et al 2005	Canada	Qualitative case study	A tertiary-care teaching hospital with 612 acute-care beds, 543 long-term care beds, 74 nursery beds and 22 rehabilitation beds	Allocation of hospital resources (and budgets) between departments and service areas –hospital strategic planning process	To examine power differences associated with institutional roles in the context of management decision-making about organizational priorities
Bochner et al 1994	Australia	Qualitative case study	A tertiary referral hospital with about 900 beds	Health technology acquisition-Medicines formulary management	To report experiences and initial responses from the hospital staff to a method to assign ranking priorities by means of a formal scoring system used for previously unfunded initiatives to allow their serial and orderly introduction into the hospital formulary
Vissers 1995	Denmark	Mixed methods case study	A hospital in Denmark	Health technology acquisition	To develop a model for resource allocation based on patient flow and to test this model on the allocation of hospital resources
Durand-Zaleski 1996	France	Interventional case study	A hospital in France	Health technology acquisition	To describe the testing of a tool to help decision makers establish priorities among medical projects by scoring and ranking projects
Madden et al 2005	Canada	Qualitative case study	A network of three teaching hospitals in Toronto, Canada	Allocation of hospital resources (and budgets) between departments and service areas -Clinical activity target setting (CATS) process	To describe priority setting in a hospital and evaluate it using 'accountability for reasonableness', with particular attention to the appeal process
Martin et al 2003b	Canada	Qualitative case study	A tertiary-care teaching hospital with 612 acute-care beds, 543 long-term care beds, 74 nursery beds and 22 rehabilitation beds	Allocation of hospital resources (and budgets) between departments and service areas –hospital strategic planning process	To describe priority setting in the context of a hospital strategic planning initiative and to evaluate using 'accountability for reasonableness'
Martin et al 2003	Canada	Qualitative case study	a network of three teaching hospitals in Toronto, Canada	Health technology acquisition-Medicines formulary management	To describe priority setting for new drugs in a hospital, and to evaluate this process using 'accountability for reasonableness'
Rosenstein et al 2003	United states of America	Quantitative Survey	19 Hospitals in the United States of America	Health technology acquisition	To describe the structure and processes used by VHA west coast hospitals to performs new technology assessments

Study	Country	Study design	Study Setting	Priority setting activity	Study objectives
Bell et al 2004	Canada	Qualitative case study	A large tertiary hospital in Toronto, Canada	Allocation of hospital resources (and budgets) between departments and service areas–Priority setting during a disease outbreak (SARS)	To describe and evaluate priority setting in a hospital in response to SARS
Reeleeder et al 2005	Canada	Quantitative Survey	Forty six hospital in Ontario Canada	Allocation of hospital resources (and budgets) between departments and service areas	To elicit hospital decision makers' self-report of the fairness of priority setting in their hospitals using 'accountability for reasonableness'
Greenberg et al 2005	Israel	Quantitative Survey	Twenty-six acute care hospitals in Israel	Health technology acquisition	To explore the decision making process in adopting new technologies at the hospital level
Kapiriri et al 2006	Uganda	Qualitative case study	A referral hospital with 1,500 patient beds	Allocation of hospital resources (and budgets) between departments and service areas	To describe priority setting in a Ugandan hospital and evaluate the description using the ethical framework, accountability for reasonableness
Sharma et al 2006	Canada	Qualitative case study	A community hospital with 425 patient beds	Health technology acquisition - adoption of advanced laparoscopic surgery	To describe the current decision-making processes for the adoption of advanced laparoscopic surgery at a community hospital in Toronto, Canada and to analyze the decision-making process using the ethical framework accountability for reasonableness
Ehlers et al 2006	Denmark	Quantitative Survey	33 hospitals in Denmark	Health technology acquisition	To evaluate local decision support tools used in the Danish hospital sector from a theoretical and an empirical point of view
Kapiriri et al 2007	Uganda, Canada, Norway	Qualitative case study	Three hospitals, one in Uganda, one is Canada and the other in Norway	Allocation of hospital resources (and budgets) between departments and service areas	To describe the process of healthcare priority setting in Ontario- Canada, Norway and Uganda at the macro-, meso and micro-levels and to evaluate the description using accountability for reasonableness and to identify lessons of good practice
Danjoux et al 2007	Canada	Qualitative case study	An urban university academic health sciences centre with approximately 500 patient beds	Health technology acquisition-endovascular aneurysm repair	To describe and evaluate the decision-making process for the adoption of a new technology for repair of abdominal aortic aneurysms-endovascular aneurysm repair (EVAR)
Gallego et al 2007	Australia	Qualitative case study	A 300-bed university-affiliated, tertiary acute care hospital	Health technology acquisition-Medicines formulary management	To describe the operations of the first reported High Cost Drug Sub-Committee (HCD-SC) in a public hospital in Australia and to evaluate the decision-making process using the ethical framework of accountability for reasonableness
Haselkorn et al 2007	United States of America	Quantitative Survey	27 hospitals in the United States of America	Health technology acquisition	To assess the structure, processes, and cultural support behind hospital committees for new technology planning and approval
Gordon et al 2009	Argentina	Qualitative case study	An acute care tertiary level hospital with 350 beds	Allocation of hospital resources (and budgets) between departments and service areas	To describe priority setting in an acute care public hospital in Buenos Aires and to evaluate the priority setting process using an ethical framework

Study	Country	Study design	Study Setting	Priority setting activity	Study objectives
Valdebenito 2009	Chile	Qualitative case study	A 600 bed referral and teaching hospital in Chile	Allocation of hospital resources (and budgets) between departments and service areas –resource allocation do departments and services in the hospital	To describe, using qualitative case study methods, and evaluate, using the ethical framework 'accountability for reasonableness', priority setting in a hospital in Chile
Mitchell et al 2010	United States of America	Qualitative case study	Four hospitals in the United States of America	Health technology acquisition	To describe two evidence reports from the hospital-based HTA center which required the integration of local data
Govender et al 2011	South Africa	Quantitative Survey	21 hospital managers in South Africa, number of hospitals not specified	Health technology acquisition	To adapt and use the DACEHTA mini-HTA tool to assess past decisions made by South African hospital managers, as applied to selected medical devices
Astley et al 2001	Australia	Qualitative case study	A division of women and Children's hospital in Adelaide Australia	Allocation of hospital resources (and budgets) between departments and service areas -Reallocate hospital resources to maximize health outcomes by developing a new hospital service profile	To describe priority setting and resource allocation undertaken by a division of the women's & children's hospital, in Adelaide

Appendix II: Characteristics of Selected Papers for Literature Review 2 (3.3)

Paper	Type of Paper	Country	Study Setting	Priority Setting Activity	Study Objective
Mori et al 2012	Empirical	Tanzania	Respondents from the Tanzanian health sector	Health technology acquisition—medicines formulary management	To report on the evaluation of the priority setting decision for the implementation of artemisinin based combination therapy policy against the four conditions of the Accountability for Reasonableness framework
Maluka et al 2010	Empirical	Tanzania	A district in Tanzania	Allocation of healthcare resources within the district/region	To strengthen fairness and accountability in health systems' priority setting at the district level and to evaluate subsequent changes in the quality, equity and trust in the delivery of health services and interventions
Gibson et al 2006	Empirical	Canada	A health region in Canada	Allocation of healthcare resources within the district/region	To use the Accountability for Reasonableness framework to evaluate the fairness of using Programme Budgeting and Marginal Analysis (PBMA) for priority setting and to assess how Accountability for Reasonableness might make Programme Budgeting and Marginal Analysis (PBMA) fairer
Martin et al 2002	Empirical	Canada	The Cancer Care Ontario Policy Advisory Committee for the New Drug Funding Program and the Cardiac Care Network of Ontario Expert Panel on Intracoronary Stents and Abciximab	Health technology assessment for cancer and cardiac care	To report the elements of fairness described by decision-makers engaged in priority setting in health technology assessment for cancer and cardiac care in Canada, and compare them to the four conditions of accountability for reasonableness
Kapiriri and Martin 2006	Empirical	Uganda	A referral hospital with 1500 patient beds	Allocation of hospital resources between departments and service areas	To describe priority setting in a Ugandan hospital and to evaluate the description using the ethical framework, Accountability for Reasonableness

Paper	Type of Paper	Country	Study Setting	Priority Setting Activity	Study Objective
Reeleder et al 2005	Empirical	Canada	Forty-six hospital in Ontario, Canada	Allocation of hospital resources between departments and service areas	To elicit hospital decision makers' self-report of the fairness of priority setting in their hospitals using 'accountability for reasonableness'.
Madden et al 2005	Empirical	Canada	A network of three teaching hospitals in Toronto, Canada	Allocation of hospital resources between departments and service areas	To describe priority setting in a hospital and evaluate it using 'accountability for reasonableness', with particular attention to the appeal process
Martin et al 2003b	Empirical	Canada	A tertiary-care teaching hospital with 612 acute-care beds, 543 long-term care beds, 74 nursery beds and 22 rehabilitation beds	Allocation of hospital resources between departments and service areas	To describe priority setting in the context of a hospital strategic planning initiative and to evaluate using 'accountability for reasonableness'
Bell et al 2005	Empirical	Canada	A large tertiary hospital in Toronto, Canada	Allocation of hospital resources between departments and service areas	To describe and evaluate priority setting in a hospital in response to SARS
Valdebenito et al 2009	Empirical	Chile	A 600 bed referral and teaching hospital in Chile	Allocation of hospital resources between departments and service areas	To describe, using qualitative case study methods, and evaluate, using the ethical framework 'accountability for reasonableness', priority setting in a hospital in Chile
Gibson et al 2005	Empirical	Canada	Urban academic health center	Allocation of hospital resources between departments and service areas	To examine power differences associated with institutional roles in the context of management decision-making about organizational priorities
Gordon et al 2009	Empirical	Argentina	An acute care tertiary level hospital with 350 beds Allocation of hospital resources (and budgets) between departments and service areas	Allocation of hospital resources between departments and service areas	To describe priority setting in an acute care municipal level public hospital in Buenos Aires and to evaluate the priority setting process using an ethical framework for fair processes.
Baeroe K 2009	Conceptual	-	-	Allocation of resources among patient groups	To develop a framework for clinical decision making

Paper	Type of Paper	Country	Study Setting	Priority Setting Activity	Study Objective
Bruni et al 2007	Empirical	Canada	The Ontario Wait Times Strategy (OWTS)	Allocation of resources among patient groups	To describe priority setting in the Ontario Wait Time Strategy (Ontario, Canada) and evaluate it with particular attention to public involvement
Sharma et al 2007	Empirical	Canada	A community hospital with 425 patient beds	Health technology acquisition—adoption of advanced laparoscopic surgery	To describe the current decision-making processes for the adoption of advanced laparoscopic surgery at a community hospital in Toronto, Canada and to analyze the decision making process using the ethical framework Accountability for Reasonableness
Danjuox et al 2007	Empirical	Canada	An urban university academic health sciences centre with 500 patient beds	Health technology acquisition—endovascular aneurysm repair	To describe and evaluate the decision-making process for the adoption of a new technology for repair of abdominal aortic aneurysms-endovascular aneurysm repair
Martin et al 2003	Empirical	Canada	A network of three teaching hospitals in Toronto, Canada	Health technology acquisition—medicines formulary management	To describe priority setting for new drugs in a hospital and to evaluate this process using 'accountability for reasonableness'
Gallego 2007	Empirical	Australia	A 300-bed university-affiliated, tertiary acute care hospital	Health technology acquisition—medicines formulary management	To describe the operations of the first reported High Cost Drug Sub-Committee in a public hospital in Australia and to evaluate the decision-making process using the ethical framework of Accountability for Reasonableness
Friendman 2008	Conceptual		-	No specific priority setting activity	A critique of Accountability for reasonableness
Greenberg et al 2009	Empirical	Israel	National health insurer	Health technology acquisition-medicines formulary management	To examine the legitimacy and fairness of the process of updating the NLHS in Israel

Paper	Type of Paper	Country	Study Setting	Priority Setting Activity	Study Objective
Kapiriri et al 2007	Empirical	Uganda	Three hospitals, one in Uganda, one in Canada and the other in Norway	Allocation of hospital resources between departments and service areas	To describe the process of healthcare priority setting in Ontario, Canada, Norway and Uganda at the macro, meso and micro levels and to evaluate the description using Accountability for Reasonableness and to identify lessons of good practice
Peacock et al 2006	Conceptual	-	-	Allocation of hospital resources between departments and service areas	We describe two checklists to aid managers and doctors in implementing local frameworks for resource management based on this approach.
Kapiriri et al 2010	Empirical	Low and middle income countries	Low and middle income countries	Allocation of resources at all levels of the healthcare system	The purpose of this paper is to describe a framework for evaluating success in priority setting in LMIC
Gibson et al 2004	Empirical	Canada	Canadian academic health science centers	Allocation of hospital resources between departments and service areas	To assist decision-makers in developing fair priority setting processes, we conducted one-day workshops for Board members and senior administrators at three Canadian academic health science centers (Saskatoon Health Region, Kingston General Hospital and The Ottawa Hospital), who were seeking ethics advice on how to improve priority setting in their organizations
Sibbald 2010	Empirical	Canada	A mid-sized acute care urban community hospital	Allocation of hospital resources between departments and service areas	To describe the development and piloting of a process to evaluate priority setting in health institutions.
Sibbald 2009	Empirical	Canada	International, national and local respondents in the Canadian health system	Allocation of resources at all levels of the healthcare system	To present a synthesized definition of successful priority setting brought together from the findings of three empirical studies describing successful priority setting from the viewpoint of stakeholders (decision makers, patients, and priority setting scholars).

Paper	Type of Paper	Country	Study Setting	Priority Setting Activity	Study Objective
Mitton and Donaldson 2003	Empirical	Canada	Three Canadian health regions	Allocation of healthcare resources within the district/region	To report on numerous lessons learned from a comprehensive evaluation of Programme Budgeting and Marginal Analysis (PBMA), based in Alberta
Mitton et al 2003	Empirical	Canada	The surgical department of a rural hospital in Canada	Allocation of hospital resources between departments and service areas	The objective of this study was to determine how resources within a surgical program in a Canadian rural hospital might be reallocated to better meet the needs of the local community
Wailoo et al 2005	Empirical	United Kingdom	The public in a district in the United Kingdom	Allocation of resources at all levels of the healthcare system	To explore the potential for applications of procedural preferences to health specifically by focusing on the analysis of procedural issues in the context of health-care rationing decisions
Shayo et al 2012	Empirical	Tanzania	District health system	Allocation of healthcare resources within the district/region	To explore challenges to fair decision-making processes in health care services with a special focus on the potential influence of gender, wealth, ethnicity and education
Dolan et al 2007	Conceptual	-	-	Allocation of resources at all levels of the healthcare system	To consider whether the same set of procedural characteristics that have been identified as important in the fields of social psychology and legal studies are also important in a social choice context and to provide tentative evidence on the relative importance attached to the different characteristics. The third aim of this paper is to consider the reasons why some procedural characteristics matter

Appendix III: Characteristics of Frameworks used to evaluate Priority Setting Practices in selected Papers for Literature Review 2 (3.3)

Paper	Evaluative Framework Employed	Process Measures of Priority Setting	Outcome Measures of Priority Setting
Mori et al 2012	Accountability for Reasonableness	Relevance Publicity Appeals and revisions Enforcement	-
Maluka et al 2010	Accountability for Reasonableness	Relevance Publicity Appeals and revisions Enforcement	-
Gibson et al 2006	Accountability for Reasonableness	Relevance Publicity Appeals and revisions Enforcement	-
Martin et al 2002	Accountability for Reasonableness	Relevance Publicity Appeals and revisions Enforcement	-
Kapiriri and Martin 2006	Accountability for Reasonableness	Relevance Publicity Appeals and revisions Enforcement	-
Reeleder et al 2005	Accountability for Reasonableness	Relevance Publicity Appeals and revisions Enforcement	-

Paper	Evaluative Framework Employed	Process Measures of Priority Setting	Outcome Measures of Priority Setting
Madden et al 2005	Accountability for Reasonableness	Relevance Publicity Appeals and revisions Enforcement	-
Martin et al 2003b	Accountability for Reasonableness	Relevance Publicity Appeals and revisions Enforcement	-
Bell et al 2005	Accountability for Reasonableness	Relevance Publicity Appeals and revisions Enforcement	-
Valdebenito et al 2009	Accountability for Reasonableness	Relevance Publicity Appeals and revisions Enforcement	-
Gibson et al 2005	Accountability for Reasonableness	Relevance Publicity Appeals and revisions Enforcement	-
Gordon et al 2009	Accountability for Reasonableness	Relevance Publicity Appeals and revisions Enforcement	-
Baeroe K 2009	Accountability for Reasonableness	Relevance Publicity Appeals and revisions Enforcement	-

Paper	Evaluative Framework Employed	Process Measures of Priority Setting	Outcome Measures of Priority Setting
Bruni et al 2007	Accountability for Reasonableness	Relevance Publicity Appeals and revisions Enforcement	-
Sharma et al 2007	Accountability for Reasonableness	Relevance Publicity Appeals and revisions Enforcement	-
Danjuox et al 2007	Accountability for Reasonableness	Relevance Publicity Appeals and revisions Enforcement	-
Martin et al 2003	Accountability for Reasonableness	Relevance Publicity Appeals and revisions Enforcement	-
Gallego 2007	Accountability for Reasonableness	Relevance Publicity Appeals and revisions Enforcement	-
Friendman 2008	Accountability for Reasonableness	Relevance Publicity Appeals and revisions Enforcement	-
Greenberg et al 2009	Accountability for Reasonableness	Relevance Publicity Appeals and revisions Enforcement	-

Paper	Evaluative Framework Employed	Process Measures of Priority Setting	Outcome Measures of Priority Setting
Kapiriri et al 2007	Accountability for Reasonableness	Relevance Publicity Appeals and revisions Enforcement	-
Peacock et al 2006	An evaluative framework that employs a combination of procedural conditions and outcome measures to evaluate priority setting	Publicity Appeals	Establish organizational objectives Ensure implementation
Kapiriri et al 2010	An evaluative framework that employs a combination of procedural conditions and outcome measures to evaluate priority setting	Wide stakeholder involvement Decisions based on relevant and appropriate criteria/reasons Publicity Availability of appeals mechanisms	Increased efficiency Improved quality of decisions More appropriate resource allocation Increased use of evidence Reflection of public values Increased public awareness of the priority setting process Increased stakeholder awareness of and articulation of public values for priority setting Increased public confidence and acceptance of the decisions Increased stakeholder satisfaction Understanding and compliance with the process Reduced dissensions Reduced wastage of resources Increased internal accountability Achievement of institutional objectives and goals Improved internal accountability/reduced corruption Increased capacity for priority setting Strengthened institutions and impact on institutional goals and objectives Impact on health policy and practice Achievement of the health system goals Increased public accountability Increased investment in health

Paper	Evaluative Framework Employed	Process Measures of Priority Setting	Outcome Measures of Priority Setting
Gibson et al 2004	An evaluative framework that employs a combination of procedural conditions and outcome measures to evaluate priority setting	**Efficiency of priority setting process** Increased ease in allocating resources Improved capacity for making priority setting decisions Perceived return on time invested **Fairness** Stakeholder understanding of the process Stakeholders feel engaged Priorities are justified and seen to be reasonable Process is perceived to be consistent and fair Winners, losers issues well managed Relevance Publicity Appeals and revisions Enforcement	Priorities change/resources shift Strategic plan supported Conditions for growth created Budget balanced Staff satisfaction neutral or positive Staff retention neutral or positive Organizational understanding improved Public media recognition neutral or positive Public acceptance or community support improved Public perception of institutional accountability improved Healthcare integration through partnerships increased Education/research peer recognition enhanced Emulated by other organizations
Sibbald 2010	An evaluative framework that employs a combination of procedural conditions and outcome measures to evaluate priority setting	Stakeholder engagement Explicit process Information management Consideration of context and values Revisions and appeals mechanisms	Stakeholder understanding Shifted priorities/reallocation of resources Improved decision making quality Stakeholder acceptance and satisfaction Positive externalities
Sibbald 2009	An evaluative framework that employs a combination of procedural conditions and outcome measures to evaluate priority setting	Stakeholder engagement Explicit process Information management Consideration of context and values Revisions and appeals mechanisms	Stakeholder understanding Shifted priorities/reallocation of resources Improved decision making quality Stakeholder acceptance and satisfaction Positive externalities

Paper	Evaluative Framework Employed	Process Measures of Priority Setting	Outcome Measures of Priority Setting
Mitton and Donaldson 2003	An evaluative framework that employs a combination of procedural conditions and outcome measures to evaluate priority setting	One on one meetings Data not to be used as a crutch Decision making group should choose own criteria Critical review of literature Representative panel	Self rated usefulness by participants Further use of PBMA recommended Improved knowledge of service area Evaluation of historical service Options for re-design proposed Re-allocation of resources Improved patient outcomes
Mitton et al 2003	An evaluative framework that employs outcome measures	-	Usefulness re-allocation Improved patient outcomes
Wailoo et al 2005	An evaluative framework that employs procedural conditions	Voice Transparency Revisions Consistency Absence of vested interests 6) Accuracy of information	-
Shayo et al 2012	An evaluative framework that employs procedural conditions	Stakeholder involvement Shared decision making	-
Dolan et al 2007	An evaluative framework that employs procedural conditions	Voice Consistency Accuracy Reversibility Transparency Neutrality	-

Appendix IV: Informed Consent Forms for In-depth Interviews

Title: Examining priority setting and resource allocation in County hospitals in Kenya

Edwine Barasa	KEMRI /Wellcome Trust Research Programme/ University of Cape Town

My name is _____. I work for KEMRI, which is a government organization under the Ministry of Public Health and Sanitation and the Ministry of Medical Services. KEMRI conducts research activities to learn more about health and illnesses in Kenya, including health systems research.

What is KEMRI and what is this research about?

- KEMRI is a government organization that carries out medical research to find better ways of preventing and treating illness in the future for everybody's benefit. Sometimes research involves only asking questions to health providers and district health team members, about what they know, feel or do.
- All research at KEMRI has to be approved before it begins by several national [and international] committees who look carefully at planned work. They must agree that the research is important, relevant to Kenya and follows nationally and internationally agreed research guidelines. This includes ensuring that all participants' safety and rights are respected.
- In this research, we want to learn more about how decision makers in hospitals plan for the delivery of health services within the organizations they work for. We are particularly interested in how decisions are made to allocate or manage resources in this hospital. We would like to discuss these issues with national level decision makers, DHMT members, senior hospital managers, a selected group of departmental managers and front line health workers from this hospital. We would like to talk to people within the hospital grounds in a quiet and private room/office of convenience to you. This is a personal discussion and other than the interviewer and a note taker, no-one else but the interviewer will be present unless you would like someone else there. If you do not want to answer any of the questions you may say so and the interviewer will move on to the next question. If you agree, the discussion will be tape-recorded to assist later in fully writing up the information. No-one will be identified by name on the tape or in the transcriptions.

Voluntary Participation

Participation in this study is voluntary. If you agree to help with this research and later change your mind you are free to withdraw at any time. The interview should take approximately 30 minutes to one hour. Refusing to participate will not in any way affect your current or future job prospects.

Potential Risks and Benefits of the Study

Given that the study is non-experimental it is unlikely to cause any physical or psychological harm to you. While the study has no direct benefits to you, the results will form a useful basis for potential policy interventions that will improve the way the hospital plan and manager its resources and hence improve its performance in delivering care and meeting the needs of the community it serves. There will be no form of remuneration to participate in the study.

Confidentiality and Anonymity

We would like to clarify that we are not here to inspect or audit the facility. The information obtained by interviews will be used for research purposes only. Apart from members of the research team, no one else will have access the data collected from these interviews and your identity or name will not be used in any reports of this work. For protection of the hospital and your confidentiality, data collected will remain anonymous by ensuring that your name and that of the hospital are not recorded, rather codes will be used and interviews will always be conducted by an investigator and assistant who are both part of the research team. All data that are provided will be confidential. The knowledge gained from this research will be shared in summary form, without revealing individuals' identities.

The study has been approved by the ethics committee of KEMRI and by national and county health managers.

What if I have any questions? In case you have any questions please contact the principal researcher using the contacts below:

Dr Edwine W. Barasa, KEMRI Wellcome Trust Research Programme, P.O. Box 43640 – 00100 Nairobi, Kenya

Telephone: 0722 129 757

If you want to ask someone independent anything about this research please contact:
Community Liaison Manager, KEMRI – Wellcome Trust, P.O Box 230, Kilifi. Telephone: 0723 342 780/0738 472 281 or 041 7522 063

Or

The Secretary - KEMRI/National Ethics Review Committee, P. O. BOX 54840-00200, Nairobi, Tel number: 020 272 2541 Mobile: 0722 205 901 or 0733 400 003

I have had the study explained to me. I have understood all that has been read/explained and had my questions answered satisfactorily

☐ **Yes** *please tick* **I agree to be interviewed**

☐ **Yes** *please tick* **I agree for the interview to be recorded**

I understand that I can change my mind at any stage and it will not affect me in any way.

Signature: _____ **Date** _____

Participant Name: _____ **Time:** _____
(please print name)

Appendix V: Topic Guide for Preliminary Interviews to Explore Priority Setting Context in County Hospitals in Kenya

Date of discussion:	**Interviewer:**	
Venue:	**Note taker:**	
Time start:	**Hospital:**	
Time stop:	**Interviewee's code:**	
Interview completed	**Yes**	
	No	
Reason for Incomplete interview		

Interviewer's remarks about session and issues from debrief

DOMAINS	SAMPLE QUESTIONS
	Introduction *I am conducting research on how hospitals set their priorities and make decisions about how to distribute (allocate) the resources available to them to different departments, services and patient groups (give an example). I am going to discuss with you about this hospitals priority setting activities.*
Context	*I would like to begin by exploring wider contextual issues……* **Economic and financial factors** 1. Would you tell me the different sources of financing/funds for this hospital? *Probe* -What is the proportion of funding from the different sources? -Who, in your opinion is the most important source of funds and why? 2. Could you explain to me how the hospital requests for the funds and how the funds are transferred from the source to the hospital? *Probe* -What do you think about this request and transfer procedure? -How long does the process take? What do you think about the length of the process? -Are there intermediaries? Who are they? What is their role? What do you think about their role? 3. Are there conditions associated with these funding sources? *Probe* -For each of the funding sources, do you know of any conditions or requirements to be met for funding? -Do the funders (financing source) have a say on how the funds are used? How do they achieve this? -What is your opinion about this? Do you think the conditions are fair and appropriate? **Socio-political and organizational factors** 4. Could please explain to me organizational structure of the hospital? *Probe* -Is this the official structure? -If yes, is there an informal structure? Please describe this? How is it different from the formal structure and why? -Does this organizational structure work in practice? 5. Could you please tell me what autonomy this hospital is expected to have over resource allocation decisions? Are there different levels and types of autonomy for different departments in resource allocation decisions within the hospital *Probe* -What resource allocation decisions is the hospital officially allowed to make? -What resource allocation decisions is the hospital officially not allowed to make? - Are there times when unofficial decisions are made – and if so why? 6. In your opinion, what autonomy does this hospital actually have over resource allocation decisions? *Probe* -What resource allocation decisions does the hospital actually make? 7. In your opinion, what factors influence the hospitals exercise of their

	autonomy over resource allocation decisions? 8. In your opinion, what other contextual issues could impact priority setting activities in these hospitals?
Content	*Priority setting refers to the distribution of resources among competing programmes and patients or patient groups* 9. What are the current health service priorities in this hospital? *Probe* -Is there a document where hospital priorities are outlined? -Is there another way (other than documents) in which hospital priorities are represented? 10. Could you tell me the different types of priority setting/resource allocation decisions or activities that are carried out in the hospital? Please explain *Probe* -What hospital resources are allocated in each of the activities? -Where do these resources come from? -How does the hospital acquire these resources? -Are there rules of guidelines that guide each of these activities? -Where do the rule and guidelines come from? -Are they used? If not, why not? 11. Does the hospital have a vision, mission and goal? Probe -How where these developed? -Who was involved in developing these? -How does the vision, mission and goals of the hospital affect the activities of the hospital? -What is your opinion on the vision, mission and goal? 12. Can you tell me about any major capital investment decisions (or project initiated) that have been made in the hospital in the past 2 years? (e.g. purchasing an equipment, building a ward) *Probe* -What investment decision -When was the decision made -Has the project been completed -What is the source of funding for the project -Do you agree with the decision? If not why not?
Process	*Lets now talk about how these processes are actually carried out…* 13. For each of the priority setting activities you have outlined, could you please explain how the activities are conducted? *Probe* -What is the procedure for making these allocation decisions? -How formal/informal is the process? -Are there committees responsible for these activities? Composition? Committee guidelines? -Are there meetings? What meetings? When do they meet?

Appendix VI: Topic Guide for In-depth Interviews to describe and evaluate the Hospital-wide Planning Processes in County Hospitals

Date of discussion:	**Interviewer:**	
Venue:	**Note taker:**	
Time start:	**District:**	
Time stop:	**Interviewee's code:**	
Interview completed	**Yes**	
	No	
Reason for Incomplete interview		

Interviewer's remarks about session and issues from debrief

1.

2.

3.

DOMAINS	SAMPLE QUESTIONS
Context	**Financial factors** 1) (Explore how the financing gap affects priority setting) –> according to the 2011-2012 records the financing gap was 45%, in your opinion how do you think the gap between available resources and resource needs affects the way the hospital plans/sets priorities, and resources are allocated/budgets are allocated? **Socio-political and organizational factors** **Decision space** 1. Could you please explain what autonomy the hospital has to decide on the health care priorities they select in the annual work plan (what can they decide, and what cant they decide?)? 2. What about the autonomy the hospital has to decide how to allocate the hospital budget? (FIF? Money from MOH, Development partners? NHIF?) 3. In your opinion, what factors influence this autonomy 4. In your opinion, what role does the central ministry of health have in determining health priorities selected in the AWP? 5. What about in determining how the hospital budget is allocated? 6. In your opinion, what role do the donors of health have in determining health priorities selected in the AWP? 7. What about in determining how the hospital budget is allocated? **Decision making Capacity** 8. How does the training and skills of the people involved in hospital budget and development of AWP affect these processes? 9. Has any member in the hospital attended any management training? What training? Who organized the training? Which members of the hospital attended the training? 10. In your opinion, do the people involved in the process of hospital budgeting and development of AWP have the necessary training and skills? **Leadership** 11. Would you describe the leadership style in the hospital? 12. In your opinion, how does the fact that the hospital superintendent is also a clinician with clinical duties affect leadership in general and hospital planning specifically (budgeting and AWP)
Actors	13. In your opinion, who influences in the budgeting process in the hospital? How do they influence this? 14. In your opinion, who influences in the AWP process in the hospital? How do they influence this? 15. In your opinion who should be involved in the budgeting process in the hospital? why? Who should not be involved?why? 16. In your opinion who should be involved in the AWP process in the hospital? Why? Who should not be involved?why? 17. Who is actually involved? why? 18. At what stage of the budgeting/AWP process is each of the actors involved? 19. What is role of each or the actors/participants in the decision making process? 20. What is the relationship between the actors you have mentioned? 21. In your opinion why is it that clinicians/doctors don't seem to participate in hospital budgeting and/or AWP process?
Community values	22. Is there any effort by the hospital to obtain community views on how to allocate the budget or set priorities in the AWP? (ask about community participation,

	community values) 23. In what ways, if it happens, are community views incorporated in the hospital planning process?
Process	**Procedure** 24. What is the official procedure for hospital budgeting? (who are the members of EEC? HMT? HMC? what sorts of decisions do they make) 25. What is the official procedure for development of AWP? (What role does the members of EEC? HMT? HMC? what sorts of decisions do they make) 26. What procedure is actually followed? Why? 27. If the procedure followed is different from official procedure, what are the reasons for this difference? 28. How is the hospital budgeting and AWP process related? 29. In your opinion, why do these processes appear not to be coordinated/related? **Relevant criteria** 30. In your opinion what criteria should be used to allocate budgets to departments in the hospital? Why? 31. In your opinion, what criteria should be used to select health priorities in the AWP process? Why? 32. What criteria are actually used to allocate hospital budgets? Why? 33. How do the hospitals determine whether these criteria have been met by the departments? 34. What criteria are actually used to select health priorities in the AWP process? Why? 35. How do the hospitals determine whether these criteria have been met by the health priorities? 36. In your opinion how does the revenue generation potential of the department/project affect decisions about planning/budgeting? Why? Can you give examples? **Transparency and publicity** 37. In your opinion, is the budgeting process in the hospital transparent? Why? 38. Are decisions about budget allocation communicated to others? To who? How? Do you feel this communication is adequate? Why? 39. Is the AWP communicated to others? To who? How? 40. Are reasons/criteria for budgeting/AWP transparent or accessible to everyone involved or affected by the decisions **Appeals and revisions** 41. Is there a mechanism to appeal decisions about budget allocation? If so please describe it 42. Is there a mechanism to appeal decisions about health priorities in the AWP? If so please describe it 43. In your opinion, do successful appeals lead to revisions of decisions? **Enforcement** 44. Are budget allocation decisions implemented according to plan? 45. If not why? 46. Are AWP plans implemented according to plan? Do you know of instances where some plans are not implemented? Is this always the case? Why are they not implemented? 47. In your opinion what factors affect the implementation of hospital budgets? What about AWP? 48. What mechanisms are in place to ensure that budget allocation decisions are

	implemented? What about AWP? **Information/Evidence Use** 49. What information/tools do decision makers use to budget allocation decisions? Is this information available? Where from? 50. What about to set health priorities in AWP? Is this information available? Where from? 51. What factors affect access/availability of these information/tools? 52. What is the quality and reliability of this information and tools? 53. In your opinion, is the information used in the planning process accurate and reliable?
Content	51. Are there official guidelines for hospital budget allocation? Where are they? 52. Are there official guidelines for AWP process? Where are they?

Appendix VII: Topic Guide for In-depth Interviews to describe and evaluate Medicine selection processes in County Hospitals

Date of discussion:	**Interviewer:**	
Venue:	**Note taker:**	
Time start:	**District:**	
Time stop:	**Interviewee's code:**	
Interview completed	**Yes**	
	No	
Reason for Incomplete interview		

Interviewer's remarks about session and issues from debrief

1.

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DOMAINS	SAMPLE QUESTIONS
Context	**Financial factors** 1. Could you please describe the sources of medicines in this hospital? 2. For each source of medicines, who pays (finances) for the medicines? 3. Can you explain the process, by which the hospital procures these medicines from the mentioned sources? 4. Could you please explain the process by which the hospital pays for (or ensures third parties pay) for the medicines) 5. What conditions are associated with these sources of medicines? 6. What conditions are associated with these funding sources? **Socio-political and organizational factors** 7. Could you please explain what autonomy the hospital has to decide on what types and quantities of medicines to procure? 8. In your opinion, what role does the central ministry of health (and or KEMSA) have in determining what types of quantities 9. In your opinion, what factors influence this autonomy (what to procure and how much to procure)?
Actors	10. In your opinion, who influences the selection of medicines to be procured in the hospital and who influences the quantities to be procured? How do they influence this? 11. In your opinion who should be involved in making decisions about the medicines to be procured in the hospital? why? 12. Who is actually involved? why? 13. How are these people selected, or how do they become part of the decision making process? 14. At what stage of the medicines selection process is each of the actors involved? 15. What is role of each or the actors/participants in the decision making process 16. In your opinion, how does each of these actors affect the decision making process and why? 17. In your opinion, how does each of these actors relate with each other and why?
Community values	18. In what ways, if it happens, are community views incorporated in the medicines selection process?
Process	**Procedure** 19. What is the official procedure for making decisions about what medicines to procure? (is there a Drugs and therapeutic committee, who are the members, is it functional, how often do they meet, what sorts of decisions do they make) 20. What is the procedure for making decisions about how much of each medicine to procure? 21. What procedure is actually followed? 22. If the procedure followed is different from official procedure, what are the reasons for this difference? **Relevant criteria** 23. In your opinion what criteria should be used to decide which medicines to procure and what quantities? 24. What are actually used criteria are used to decide which medicines to procure and what quantities to procure? 25. How do the hospitals determine whether these criteria have been met by the medicines they select?

	26. Why are some criteria (the ones you feel should be used and are not used) not used to select medicines and to determine quantities to be procured? **Transparency and publicity** 27. In your opinion, is the process of determining what medicines to be procured by the hospital transparent? 28. How the decisions about what medicines can be procured by the hospital communicated? 29. Are reasons/criteria for selection of medicines transparent or accessible to everyone involved or affected by the decisions? 30. Which stakeholders have access to information about which medicines can be procured and in what form do they access this information **Appeals and revisions** 31. Is there a mechanism to appeal decisions about medicines selection? If so please describe it 32. In your opinion, do successful appeals lead to revisions of decisions? **Enforcement** 33. What mechanisms are in place to ensure that medicines selection decisions are implemented? 34. Are there instances where medicines not officially approved for procurement are procured? What are the mechanisms in place to prevent this and what are the factors that lead to this violation of formulary decisions? **Information/Evidence Use** 35. What information/tools do decision makers use to make medicine selection decisions 36. What factors affect access/availability of these information/tools? 37. What is the quality and reliability of this information and tools?
Content	38. What are the official Guidelines/rules for medicine selection in this hospital? 39. Is there a hospital formulary to outlines selected medicines?

Appendix VIII: Topic Guide for In-depth Interviews to describe and evaluate Nursing Allocation Processes in County Hospitals

Date of discussion:	**Interviewer:**	
Venue:	**Note taker:**	
Time start:	**District:**	
Time stop:	**Interviewee's code:**	
Interview completed	**Yes**	
	No	
Reason for Incomplete interview		

Interviewer's remarks about session and issues from debrief

1.

2.

3.

DOMAINS	SAMPLE QUESTIONS
Context	**Financial factors** 1. Could you please describe the situation of nursing staff shortage in the hospital? 2. What is the source of funding for nursing training opportunities in the hospital **Socio-political and organizational factors** 3. Could you please explain the role of the health ministry in the allocation of nurses in the hospital (number, cadre, specialization) what about its role in transferring? What role does the hospital play?
Actors	4. In your opinion, who influences the allocation of nurses to the different wards and clinics in the hospital? How do they influence these process?
Process	**Procedure** 5. What is the official procedure for nurses allocation to the different wards and clinics? (is there a committee, who are the members, is it functional, how often do they meet, what sorts of decisions do they make) 6. What procedure is actually followed? (if different from official) why? 7. What is the official procedure for making nurses training allocation to the different wards and clinics? (is there a committee, who are the members, is it functional, how often do they meet, what sorts of decisions do they make) 8. What procedure is actually followed? (if different from official) why? **Relevant criteria** 9. What are the official criteria is used to decide the number of nurses to be allocated to different wards? Why? 10. What criteria are actually used? Why? 11. What are the official criteria used to decide which nurses and what departments receive nursing training? 12. What criteria are actually used? Why? 13. How do the hospitals determine whether these criteria have been met by the departments/nurses they select? **Transparency and publicity** 14. Are decisions about nursing allocation and training allocation communicated to the departments? If so how are they communicated? 15. How are nursing training opportunities communicated to departments/nurses? Do you feel that training opportunities are adequately communicated to nurses/departments? Why? 16. Are reasons/criteria for nursing allocation and training allocation communicated or accessible to everyone involved or affected by the decisions? **Appeals and revisions** 17. Is there a mechanism to appeal decisions about nursing allocation and training allocation? If so please describe it

	Enforcement **18.** Are the official decisions about nursing allocation and training implemented in practice? **19.** What factors affect the effective implementation of nursing allocation and training allocation decisions? **Information/Evidence Use** 20. What information/tools do decision makers use to make nursing allocation and training allocation decisions? 21. What are the sources of this information? 22. Do you feel that the information used is accurate and reliable? Why?
Content	23. Are there official guidelines/rules for nursing allocation and training allocation in this hospital?

Appendix IX: Topic Guide for In-depth Interviews with National Level Policy Makers

Date of discussion:	**Interviewer:**	
Venue:	**Note taker:**	
Time start:	**District:**	
Time stop:	**Interviewee's code:**	
Interview completed	**Yes**	
	No	
Reason for Incomplete interview		

Interviewer's remarks about session and issues from debrief

1.

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Hospital budgeting and planning process

Financing

1. What is the formula used to allocate recurrent and development funds to district hospitals
2. Is there a guideline for the use of FIF by hospitals?
3. What are the intended use of cost-sharing funds according to the policy if present
4. Does the expansion of the scope of expenses financed by cost sharing funds in hospitals mean that the policy has officially been revised?
5. What does the cost-sharing policy

Planning process

6. What are the structures/systems/arrangements for monitoring the implementation of AWP processes?
7. What are the structures/systems/arrangements for monitoring the implementation of performance contracting?
8. What is the role of performance contracting in setting hospital priorities?
9. Do you give hospitals any directions on how to spend their resources? How does the vote system work?
10. How does the authority to incur expenditure system work?
11. Are there structural decision making guidelines for hospitals? Is there an official organogram for hospitals?
12. Are there guidelines for the various committees? HMT, HMC, EEC
13. Are there official guidelines for membership in these committees?
14. How are amounts of funds allocated to hospitals for recurrent and development funds determined

Medicines selection

15. How are decisions about the selection of medicines to the essential medicines list made?

-Who makes these decisions

-What is the decision making process? – a standing committee? An ad hoc committee? Etc

-What criteria is used to select medicines for inclusion

-How often is the EML reviewed?

16. What is the link between the EML and the official clinical guidelines in the ministry? (pediatrics, malaria, HIV/AIDS, TB, etc) and the benefit package offered by NHIF?
17. What is the objective of the KEMSA privatization plan?

-Under this plan is there a difference between the range of medicines that will be available under the

private and the public arms of KEMSA? Was considerations justified these differences if any?

-Are there any guidelines/restrictions that hospitals have when choosing the range of medicines to procure locally from funds generated through cost-sharing?

a. What plans/structures are there to monitor the functioning of Medicines and therapeutic committees in hospitals?
b. What plans/structures are there to monitor the selection and use of medicines in hospitals?

Nursing Allocation

18. There is a nursing shortage in hospitals and yet the ministry apparently stopped hiring nurses, what plans are there to remedy the nursing shortage?
19. Are there guideline/standards (from the ministry, department of nursing) on nursing allocation to different clinical areas in hospitals?

Appendix X: Topic Guide and Checklist for Document Reviews to describe and evaluate the Priority Setting Processes in County Hospitals

Date of Document reviewer :	**District:**	**Document reviewer:**
Documents reviewed: 1. 2. 3. 4. 5. 6. 7. 8. 9. 10.		

Reviewers remarks about session

1.

2.

3.

DOMAINS	GUIDING QUESTIONS	POTENTIAL SOURCE DOCUMENTS
Context	**Economic-financial factors** *What is the annual hospital funding gap?* 1. What is the annual hospital budget? 2. How much revenues/finances did the hospital raise during that year? 3. What is the contribution (proportion) of each of the financing source to the total hospital resource envelope? 4. What is the level and nature of health care demand faced by hospitals **Decision space** 5. What planning and guiding templates are available 6. What decisions are hospitals allowed to make 7. What is contained in the templates are guided by templates	1. Hospital budgets 2. Hospital annual operation plans 3. Hospital income and expenditure reports 4. Hospital utilization reports – from health management information system
Process	5. What are the official criteria for priority setting? 6. Do successful appeals lead to revisions of decisions and what influences this? 7. Are priority setting decisions actually implemented in practice? 8. How frequently do meetings take place	1. Annual operation plans 2. Hospital planning guidelines 3. Minutes of meetings 4. Hospital expenditure and investment reports
Content	9. What are the official Guidelines/rules for priority setting and resource allocation in this hospital? 10. What are the actual health service priorities in this hospital?	1. Annual operation plans 2. Hospital planning guidelines 3. Hospital expenditure and investment reports
Actors	11. Who calls for meetings 12. Who attends meetings 13. Who contributes during meetings 14. What is the relationship	4. Meeting memo's 5. Minutes of meetings

Appendix XI: Topic Guide and Checklist for Observations to describe and evaluate the Priority Setting Processes in County Hospitals

Date of Observation:	**Observer:**	
Venue:	**Note taker:**	
Time start:	**District:**	
Time stop:	**Observed meeting:**	
Observation completed	**Yes**	
	No	
Reason for incomplete observation		

Observers' remarks about session

1.

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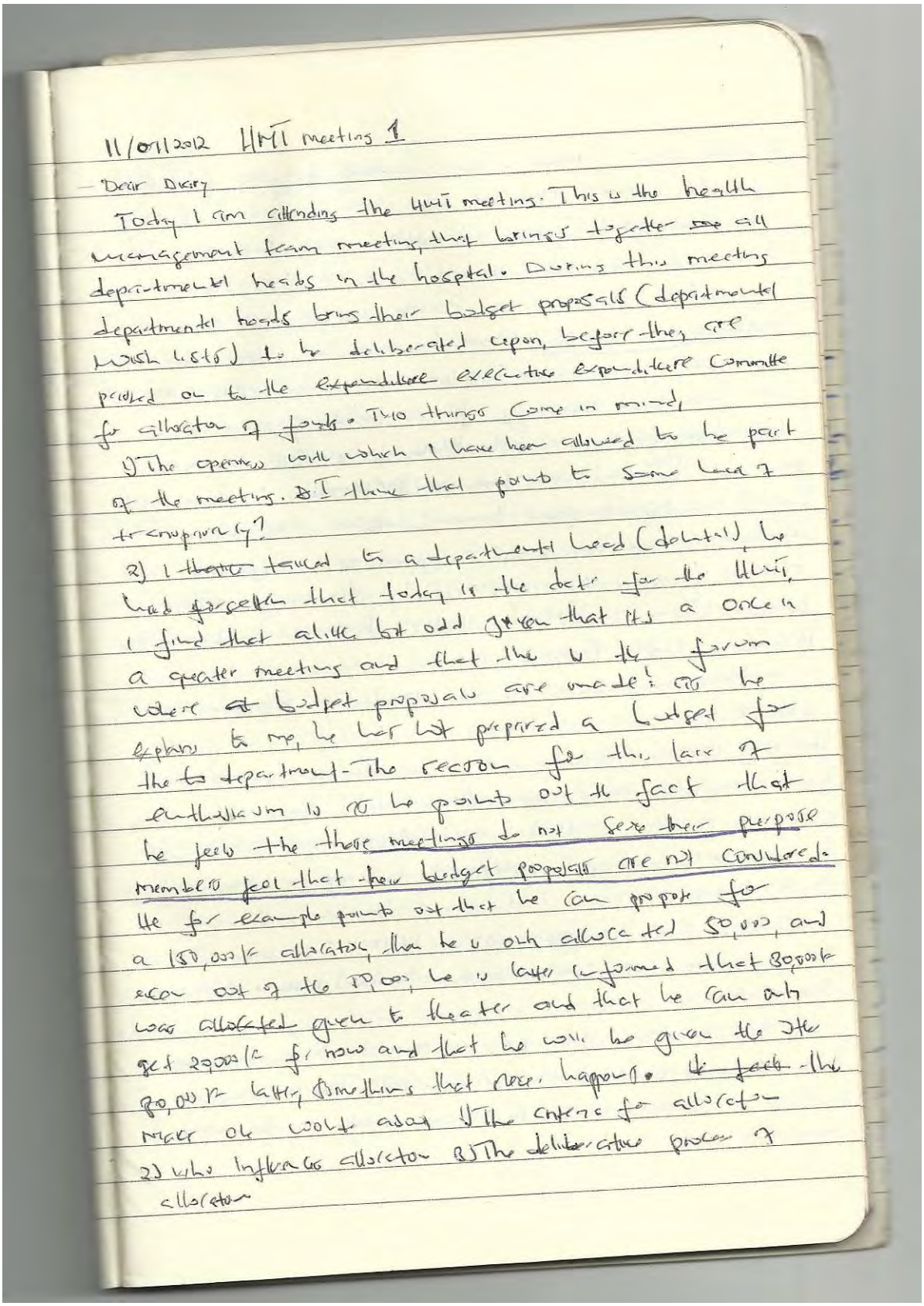
3.

DOMAINS	SAMPLE QUESTIONS
Context	**Socio-political and organizational factors** 1. What are the characteristics of the hospital leadership? 2. How does the hospital leadership relate to other staff 3. How does the hospital leadership handle their roles including priority setting roles 4. What decisions to hospitals actually make (despite there being restrictions)
Process	5. What procedure is actually followed? 6. What criteria are actually used to set priorities? 7. Do relevant stakeholders participate in decision making? 8. What information is used to make decisions, how is this information used?
Content	**9.** What are the actual health service priorities in this hospital?
Actors	10. Which people or groups of people take part in the priority setting process? 11. What are the roles of each of the actors? 12. What are the interests of each of the actors? 13. Which actors participate in decision making? 14. How do actors relate during meetings and also out of meetings 15. Whose voice is heard most in meetings, whose isn't 16. Who seems to influence decisions more than others 17. What is the relative influence of different actors in the decision making process? 18. Who has the final decision making power?

Appendix XII: Excerpt from Research Diary



11/07/2012 HMT meeting 1

Dear Diary

Today I am attending the HMT meeting. This is the health management team meeting that brings together all departmental heads in the hospital. During this meeting departmental heads bring their budget proposals (departmental wish lists) to be deliberated upon, before they are pooled on to the Expenditure Executive Expenditure Committee for allocation of funds. Two things come in mind,

1) The openness with which I have been allowed to be part of the meeting. Do I think that points to some level of transparency?

2) I ~~thought~~ turned to a departmental head (dental), he had forgotten that today is the date for the HMT, I find that alittle bit odd given that it is a once in a quarter meeting and that the is the forum where all budget proposals are made! As he explains to me, he has not prepared a budget for the to department. The reason for the lack of enthusiasm is as he points out the fact that he feels the these meetings do not serve their purpose members feel that their budget proposals are not considered. He for example points out that he can propose for a 150,000/= allocation, then he is only allocated 50,000, and even out of the 50,000, he is later informed that 30,000/= was allocated given to theater and that he can only get 20,000/= for now and that he will be given the 30,000/= later, something that never happens. ~~He feels~~ The matter of would also ~~be~~ the criteria for allocation 2) who influences allocation 3) The deliberative process of allocation

Appendix XIII: Data Analysis Coding Tree

CONTEXT	
Themes	**Sub-Themes**
Management Capacity	Planning skills
	Budgeting skills
	Resource mobilization skills
	Managers training in planning and budgeting
	Manager's experience
	Sufficient number of managers
	Availability of managers for planning and budgeting activities
Resource Gap	The degree of resource scarcity
	The factors affecting resource scarcity
	The consequences of resource scarcity
	The effect of resource scarcity on budgeting and planning
	What decision makers feel about how this affects hospital planning
Financing Arrangements	Sources of funding
	The different form of each source of funding
	Relative importance of the sources of funding
	Flow of the different sources of funding
	Challenges associated with the different sources of funding
	Determinants of the level of each source of funding
	What decision makers feel about how this affects hospital planning
Decision Space	Range of decisions hospitals are allowed to make
	Range of decisions hospitals actually make
	Types of decisions hospitals are allowed to make
	Types of decisions hospitals actually make
	Range of decisions are made at the central or county level
	Type of decisions are made at the central or county level
	Ways in which control from the central or county

	government is effected
	What decision makers feel about how this affects hospital planning
Organizational Culture	Orientation towards to the use of evidence
	Orientation towards deliberative processes
	Orientation towards innovation
	Orientation towards Internal or external focus
	Orientation towards communication
	Orientation towards task or outcome
	Orientation towards team work or individual
	Orientation towards change
Leadership	Availability and accessibility of hospital leadership
	Fostering a vision and mission of the organization
	Leadership role in developing hospital plans
	Leadership role in monitoring performance
	Leadership role in developing capacity of staff for effective decision making
	Leadership role in promoting deliberation and democracy in decision making
	Leadership role in empowering other decision makers
	Leadership role in managing stakeholder relationships
PROCESS	
Priority Setting Procedure	Types of priority setting activities
	Schedule of priority setting activities
	Procedure of priority setting activities
	Relationship and alignment between priority setting activities
	Managers feeling about how the procedure affects hospital priority setting

Communitarian Orientation	Community involvement
	Incorporation of community values
	Forms of community involvement
	Stakeholder's feelings about community involvement
Deliberative and Fair	Stakeholder engagement
	Stakeholder empowerment
	Transparency
	Revisions
Desired Outcomes	Implementation
	Stakeholder satisfaction
	Stakeholder Understanding
	Shifted priorities
Use of Information	Source of information
	Forms of information
	Quality of information
	Use of information
	Factors affecting use of information
	Effect of information use on budgeting and planning
ACTORS, THEIR POWER AND INTEREST	
Range of Actors	Who are the actors
	What is their role
	Actor participation in planning and budgeting activities
	How do the actors exercise their role
Actor Power	Levels of power
	Spaces of power
	Sources and forms of power
	Exercise of power
	Effect of power to priority setting
	Effect of power to actor relations
	Effect of power to planning and budgeting activities

Actor Interest	Actor values
	What is important to each actor
	How do actor values interact with priority setting
CONTENT	
Priority Setting Rules and Guidelines	Range of priority setting guidelines available
	Source of priority setting guidelines
	Presence of the guidelines in the hospital
	Adherence to guidelines
	Reasons for non-adherence to guidelines
	Operationalization of the guidelines
Priority Setting Criteria	Formal criteria
	Informal criteria
	Operationalizing of criteria
	Managers feeling about how criteria affects priority setting
Instruments of Priority Setting	Forms in which priority setting is captured
	Development of these forms
	Presence in the hospital
	Operationalization of these forms
	Relationship/alignment between these forms
Decision Making Structure	Hospital chain of command (organogram)
	Decision making committees, teams

Appendix XIV: Example of the Coding Process

ACTORS, THEIR POWER AND INTEREST		
Step 3- Axial coding - aggregation of sub-themes into overarching themes *(axial codes informed by literature, conceptual framework, sub themes)*	**Step 2 – refinement of open codes to sub themes *(Sub-themes informed by open codes and literature)***	**Step 1 – Open Coding Process -lines, sentences, paragraph coding**
Range of Actors	Who are the actors	The two managers seem to have more power than the med sup The disproportionate power that the HOA and accountants has led to demotivation of other staff The disproportionate power that the HAO and accountant have resulted in a lack of trust Sources of power The HAO and accountants power are in part as a result of the med sup being too busy Provincial office rubberstamps decisions Priorities from clinical departments overlooked because clinicians don't participate in planning Power used to favor departments Power plays due to position and professional identity Power differences demotivates other managers from participating in planning meetings Only two individuals make decisions Mistrust is impeding the working together among decision
	What is their role	
	Actor participation in planning and budgeting activities	
	How do the actors exercise their role	
Actor Power	Levels of power	
	Spaces of power	
	Sources and forms of power	

	Exercise of power	makers Med sup favors his department-surgery Managers think planning meetings are a waste of time Managers skip planning and budgeting meetings because they don't get allocations and are hence frustrated Managers skip planning and budgeting meetings because their input is overlooked Managers don't participate in planning meetings because they are used as avenues to advance personal interests and fights Managers don't participate in planning meetings because of negligence HMT members are not empowered to question what happens in the hospital HMT members are demoralized because of the decisions of the EEC HAO and the accountant misuse their powers HAO and the accountant have disproportionate power when compared to other managers Feeling that EEC should be disbanded Feeling that Accountant and HAO are involved in corruption Feeling by medics that while admin has power they don't understand clinical needs EEC members favor their own departments over others Donors not involved in planning and budgeting meetings Discontent over the power of the accountant Coz the accountant has power their priorities take precedence over others Composition of the HMC finance committee Clinicians skip planning meetings because they feel represented by the medical superintendent Clinicians lack understanding and knowledge of the hospital planning processes
	Effect of power to priority setting	
	Effect of power to actor relations	
	Effect of power relations to planning and budgeting activities	
Actor Interest	Actor values	
	What is important to each actor	
	How do actor values interact with priority setting	

		Clinicians identify with the hospital medical superintendent because he is a clinician too Clinicians have not received management training Clinicians have delegated management roles to the nurses Clinicians feel they need to be part of the hospital planning process Clinicians feel they are blamed by patients for lack of essential supplies Clinicians feel frustrated by lack of implementation of their proposals Clinicians feel frustrated by lack of essential supplies Clinicians don't participate Clinicians don't attend planning meetings due to frustration because their input is overlooked Clinicians don't attend planning meetings because they are not invited to meetings Clinicians don't attend planning meetings because they are few and busy Clinicians don't attend planning meetings because of negligence Clinicians don't attend planning meetings because it is part of hospital culture Clinicians do not participate in hospital planning and budgeting Clinicians bear the responsibility of explaining to patients the lack of essential supplies Actors and their power Account and HAO make decisions without communication to the rest of the team HMT members are disempowered

Appendix XV: Sample Coding Chart

Respondent Category	Who are the Actors	What is their Role	Actor Participation	How does Actor participation affect Priority Setting
Senior managers	EEC, HMT, HMC, Donors, frontline workers, the community	The role of the HMC is to oversee the activities of the hospital, as part of their oversight they are expected to review and approve hospital budgets before they are forwarded to the provincial office for approval and transmission to the national government. The role of the EEC is to make senior level budgeting decisions; they allocate and compile the final budget. The role of the HMT is to deliberate and make management decisions; they make budget proposals and deliberate on these proposals. The role of donors is to contribute to decision making about ways of supporting the hospital and to support hospital activities. Frontline workers and public appear to have no role in budgeting in this hospital	Senior managers report that all the decision making actors, The EEC, HMT, HMC were sufficiently involved in the planning and budgeting activities. They however reported that the community and frontline practitioners were not involved. They felt that the reason clinicians don't participate is their busy clinical schedules so they tend to focus on that "most of the time you find that there is only one clinician per department, so they are very very busy with their clinical duties"	Lack of clinician participation leads to under-represented clinician priorities. "You will find that we will do a budget and after that clinicians come and complain that there is something missing or has not be provided for in the budget….."

Appendix XVI: University of Cape Town Ethics Review Approval Letter

HREC Ref 627/2012 – 07Dec2012

UNIVERSITY OF CAPE TOWN

Faculty of Health Sciences
Human Research Ethics Committee
Room E52-24 Groote Schuur Hospital Old Main Building
Observatory 7925
Telephone [021] 406 6338 • **Facsimile** [021] 406 6411
e-mail: shuretta.thomas@uct.ac.za

7 December 2012

HREC REF: 627/2012

Dr E Barasa
c/o A/Prof S Cleary
Primary Health Care Directorate
E-Floor
OMB

Dear Dr Barasa

PROJECT TITLE: EXAMINING PRIORITY SETTING AND RESOURCE ALLOCATION PRACTICES IN DISTRICT / COUNTRY HOSPITALS IN KENYA

Thank you for responding to the issues raised by the Faculty of Health Sciences Human Research Ethics Committee in your letter dated 4th December 2012.

It is a pleasure to inform you that the HREC has **formally approved** the above-mentioned study.

Approval is granted for one year till the 15th December 2013

Please submit a progress form, using the standarcised Annual Report Form if the study continues beyonc the approval period. Please submit a Standard Closure form if the study is completed within the approval period.
(Forms can be found on our website: www.health.uct.ac.za/research/humanethics/forms)

Please note that the ongoing ethical conduct of the study remains the responsibility of the principal investigator.

Please quote the HREC. REF in all your correspondence.

Yours sincerely

PROFESSOR M BLOCKMAN
CHAIRPERSON, FHS HUMAN ETHICS
Federal Wide Assurance Number: FWA00001637.

Institutional Review Board (IRB) number: IRB00001938
This serves to confirm that the University of Cape Town Human Research Ethics Committee complies to the Ethics Standards for Clinical Research with a new drug in patients, based on the Medical Research Council (MRC-SA), Food and Drug Administration (FDA-USA), International Convention on Harmonisation Good Clinical Practice (ICH GCP) and Declaration of Helsinki guidelines.

Appendix XVII: KEMRI Ethical Review Approval Letter

KENYA MEDICAL RESEARCH INSTITUTE

P.O. Box 54840-00200, NAIROBI, Kenya
Tel (254) (020) 2722541, 2713349, 0722-205901, 0733-400003; Fax: (254) (020) 2720030
E-mail: director@kemri.org info@kemri.org Website:www.kemri.org

KEMRI/RES/7/3/1 **May 11, 2012**

TO: **DR. EDWINE BARASA (PRINCIPAL INVESTIGATOR)**

THROUGH: **DR. SABAH OMAR**
THE DIRECTOR, CGMR-C,
KILIFI

RE: **SSC PROTOCOL No. 2201- 2ND REVISION (*RE-SUBMISSION*): EXAMINATION GOVERNANCE PRACTICES IN THE DELIVERY OF CARE IN DISTRICT/COUNTY REFERRAL HOSPITAL IN KENYA.**

Reference is made to your letter dated April 30, 2012. The ERC Secretariat acknowledges receipt of the revised proposal on 10th May 2012.

This is to inform you that the Committee determines that the issues raised at the 200th ERC meeting of 17th April 2012 are adequately addressed. Consequently, the study is granted approval for implementation effective this **11th day of May 2012** for a period of one year.

Please note that authorization to conduct this study will automatically expire on **May 10, 2013**. If you plan to continue data collection or analysis beyond this date, please submit an application for continuation approval to the ERC Secretariat by **March 29, 2013**.The regulations require continuing review even though the research activity may not have begun until sometime after the ERC approval.

Note that any unanticipated problems resulting from the implementation of this study should be brought to the attention of the ERC. You are also required to submit any propcsed changes to this study to the SSC and ERC for review and approval prior to initiation and advise the ERC when the study is completed or discontinued.

Work on this project may begin.

Sincerely,

DR. CHRISTINE WASUNNA,
ACTING SECRETARY,
KEMRI ETHICS REVIEW COMMITTEE

KEMRI / WELLCOME TRUST
RESEARCH PROGRAMME
15 MAY 2012
RECEIVED
P. O. Box 230-80108

Appendix XVIII: Media Snapshots of Devolution in the Health Sector

Patients endure pain of devolved health sector

By MERCY KAHENDA and VINCENT MABATUK

Updated Monday, April 14th 2014 at 00:00 GMT +3

Share this story:

Related Stories

- Delivery of State functions a right, not a favour
- Tame this greed and address the real issues facing Kenyans
- Devolution boon for hotel business in Kenya
- Let's raise the bottom

Patients queue at a public hospital to see a doctor. ... hospitals are facing severe staff shortages. [PHOTO: EU...

Doublespeak on devolution of health services insincere

By Machel Waikenda

Updated Sunday, December 15th 2013 at 17:11 GMT +3

Share this story:

Related Stories

- Delivery of State functions a right, not a favour
- Tame this greed and addre the real issues facing Kenya
- Devolution boon for hotel business in Kenya
- Let's raise the bottom our counties
- MPs accused of fru devolution

Machel Waikenda

twitter@MachelWaikenda

Medical practitioners who have sworn to uphold the Hippocratic Oath, reaffirming that life is worth living, and that they shall ensure "utmost respect for human life from its beginning", have a sworn duty to safeguard life. However, the moving accounts in the media that deaths are being recorded daily in public ...tals across the country are mind-

Appendix XIX: Media snapshot of health worker strikes

Appendix XX: Media Snapshot of Resource Scarcity in the Kenyan Health Sector

Appendix XXI: Media Snapshots of Public Engagement Activities for County Budgeting Processes

REPUBLIC OF KENYA

COUNTY GOVERNMENT OF UASIN GISHU

THE CHAMPIONS

COUNTY GOVERNMENT OF UASIN GISHU

PUBLIC PARTICIPATION FORUM ON COUNTY BUDGET FOR FY 2014/2015.

Pursuant to Article 201 of Constitution of Kenya 2010 and Section 125 of Public Finance Management Act,2012, the County Government has organized Public Hearings at Sub County level to enable sector working groups to present their budget proposal for the Financial year 2014/15

General Public and interested groups are hereby invited to the public participation forum on **28th April 2014** to attend and contribute during the consultative forums as per the following schedule.

DATE	TIME	SUB-COUNTY	VENUE
28th April 2014	10.00AM	SOY	ZIWA CENTRE
			TURBO CENTRE