THE TREE UNDER WHICH YOU SIT

Realist approaches to district-level management and leadership in maternal and newborn health policy implementation in the Greater Accra Region, Ghana

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Aku Kwamie

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District-level management and leadership in maternal and newborn health policy implementation in the Greater Accra Region, Ghana

Aku Kwamie

Thesis

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For my families

PREFACE

The tree under which you sit determines your shade.

Like trees, health systems are living organisms. They have complex root systems built up over many years. They have a stable core which carries their lifeblood to branches and new buds. Most importantly, trees are known by their leaves and their fruit. They are recognised by their visible parts, but they are made up by what is unseen.

Shade has many dimensions. It can act as a sheltering umbrella, but it also has a blocking effect. Shade obscures. The shade of a tree will depend on how great or how slight its canopy is. A tree's canopy is as a function of its maturity, but also a tree's type: like its fruit, trees can only grow canopy after its own kind. The shade of a neem tree is different than that of a baobab.

Those who find themselves in the shadow of the tree will be affected by how great or how small that shadow is. Their actions in the shade will be affected by whether that shade shelters or obstructs.

The tree under which you sit determines your shade. This is a statement on complex management and leadership. In the health systems in which district managers find themselves in the Greater Accra Region of Ghana, long shadows of bureaucracy, hierarchy, and resource uncertainty constrain their decision-space and managerial autonomy. This causes district managers to be less responsive than is ideal towards the arising challenges of implementing maternal and newborn health policies. It means that managerial effectiveness and managerial capacity do not exist within managers alone as intrinsic traits, but they are related to the complexities – both seen and unseen – of the health system itself.

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ABBREVIATIONS

ANC	Antenatal Care
CAS	Complex Adaptive System
CHAG	Christian Health Association of Ghana
CHPS	Community-based Health Planning and Services
CLD	Causal Loop Diagram
CMA	Common Management Arrangement
CMO	Context-Mechanism-Outcome configuration
CQI	Continuous Quality Improvements
GAR	Greater Accra Region
GHS	Ghana Health Service
DDHS	District Director of Health Services
DHMT	District Health Management Team
DMO	District Medical Officer
DMS	Director of Medical Services
DPF	Donor Pooled Funds
EmONC	Emergency Obstetric and Neonatal Care
FGD	Focus Group Discussion
HIRD	High Impact Rapid Delivery
HPSR	Health Policy and Systems Research
IGF	Internally Generated Funds
LDP	Leadership Development Programme
LI	Legislative Instrument
LMIC	Low and Middle Income Country
MDGs	Millennium Development Goals
MMR	Maternal Mortality Ratio
MOH	Ministry of Health
MOFEP	Ministry of Finance and Economic Planning
MOLGRD	Ministry of Local Government and Rural Development
MNH	Maternal and Newborn Health
MRT	Middle Range Theory
MTEF	Medium-term Expenditure Framework
NHIS	National Health Insurance Scheme
NMR	Neonatal Mortality Ratio
PHC	Primary Health Care
PNDC	Provisional National Defence Council
POW	Programme of Work
SDHS	Strengthening District Health System Initiative
SWAp	Sector-wide Approach
WHO	World Health Organisation

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CHAPTER 1.

Introduction: A portrait of maternal and newborn health in 2015

"The Health Service is there to prevent bad things from occurring, but we are not progressing. If you take the MDGs, maternal mortality, the major causes of maternal death is haemorrhage. When the woman is in labour, she leaves the house: the first place of call is the health centre. But if she is bleeding what can the health centre do? Nothing! So by the time you get yourselves organised and move her to the district level, she is dead. So for me, common sense tells me that we must strengthen the health centre". (A national-level policy-maker)

OVERVIEW

It has been thirty years since global attention has been alerted in earnest to the issue of safe motherhood, that is, the conditions in which women and girls deliver their babies safely and healthfully to the benefit of both mother and child (AbouZahr, 2003; Rosenfield et al., 2006; Starrs, 2006). The international public health community, consisting of bi- and multi-lateral agencies (and increasingly private philanthropies), politicians, parliamentarians, government technocrats, civil society advocates, clinicians, and academic researchers, has gathered regularly to proclaim declarations, hold conferences, and invest significant resources to improving maternal and newborn health (MNH) outcomes. An abridged timeline of key proceedings which have prodded public consciousness on the topic includes the publication of global maternal mortality estimates for the first time by the World Health Organisation (1984); the First International Safe Motherhood Conference (1987); the 4th World Conference on Women (Beijing, 1995); the declaration of the Millennium Development Goals (2000); the merging of three historical safe motherhood and newborn health alliances into the Inter-Agency Partnership for Maternal, Newborn and Child Health (2005); the Countdown to 2015 high-level meeting (2008); and the United Nations Global Strategy for Women and Children's Health/Every Woman Every Child (2010). The global MNH agenda accelerated from near-oblivion to attracting significant policy and resource attention post-2000 (Smith & Rodriguez, 2015). As the clock neared midnight on the 2015 deadline to achieving set MNH targets, eyes already began to shift towards carrying over the unfinished agenda for MNH, and what it might look like.

The Millennium Development Goals (MDGs), in particular 4 and 5 – to reduce by two thirds the under-five mortality rate, and by three-quarters the maternal mortality ratio, between 1990 and 2015, respectively – have had a crystallising effect on guiding global attention towards this impetus. Since 1990, appreciation for the link between the maternal and newborn health continuum of care has received consideration (Dickson et al., 2014; Starrs, 2014), and our knowledge of these issues has been supported by a wealth of new data. Yet, despite all the conferences, political goodwill and invested resources, progress in several low- and middle-income countries, especially in sub-Saharan Africa, has been slower than desired. It is clear that MDGs 4 and 5, at current rates of progress, will not be achieved for a number of years, perhaps decades. Comparative evidence is still outstanding as to why some low- and middle-income countries have progressed more quickly than others in accelerating achievement of MDGs 4 and 5 (Kuruvilla et al., 2014).

Ghana is a country of incongruities. A small nation of 25 million, Ghana is West Africa's second largest economy, and richly endowed with agricultural, mineral and more recently, oil resources. In the past twenty years the country has evolved into a stable multi-party democracy with an active civil society and vocal media. Ghana is frequently held up as a model of democratic governance in Africa. According to the African Development Bank, Ghana is in a most promising era of her developmental history (African Development Bank, 2012). Nonetheless, the country's Human Development index value is just 0.573, ranking it 138 out of 187 countries, and placing it in the category of 'medium development' (United Nations Development Programme, 2014). Growing inequalities have accompanied economic

growth. While the currency revaluation in 2011 pushed the country into "lower-middle-income status", key development setbacks have impeded Ghana from reaching full middle-income status by 2015 (Government of Ghana National Development Planning Commission, 2010). Chief among these has been the slow progress on MDGs 4 and 5 (National Development Planning Commission et al., 2012). Thus, Ghana's MNH performance is integral to her national development. Antenatal care coverage is near-universally high with a national average of 97.3%, while the national average coverage for skilled delivery is 73.7% (Ghana Statistical Service et al., 2015). Yet these averages mask disparities across education, wealth quintiles, and geographic location. Ghana's maternal mortality ratio (MMR) is estimated to be 380 deaths per 100,000 live births (WHO et al., 2014)[1], and neonatal mortality 30 deaths per 1000 live births, representing 40% of the total under-five mortality (Ghana Ministry of Health, 2014b). This places Ghana in the category of "Stage II" in terms of her obstetric transition (Souza et al., 2014), meaning that maternal deaths due to direct causes of haemorrhage, hypertension and sepsis remain high, though there is clear evidence of accessibility to maternity care services. In fact, there is a solid evidence-base to support the notion that while access to maternity care in Ghana has increased through the reduction of financial barriers, this has not had sufficient impact on the maternal mortality rate (Ansong-Tornui et al., 2007; Bosu et al., 2007; Penfolds et al., 2007; Witter et al., 2009). Particularly worrying is that institutional MMR (that is, maternal deaths within health facilities) has remained high, and inequities are evident in skilled delivery coverage (Requejo et al., 2014). Sources indicate that Ghana's MNH outcomes are worse compared to countries of comparable income and health care spending (Saleh, 2013).

GOVERNANCE OF DISTRICT HEALTH SYSTEMS FOR MATERNAL AND NEWBORN HEALTH SERVICE DELIVERY

District-level health systems are important because they are the level where primary health care – the first level of care communities seek treatment – is planned, organised and delivered. The importance of primary health care is enshrined in the Alma-Ata declaration of 1978 (International Conference on Primary Health Care, 1978), which underlines primary health care as integral to overall country health systems, as well as the social and economic development of a community. MNH, as part of the normal life course is a core element of primary health care. It is the primary health care facility a woman will seek first to receive her family planning to control conception, antenatal care when she becomes pregnant, delivery with a skilled provider to have her baby, postnatal care to monitor the mother's and baby's well-being, and initiation of the immunisation schedule for the infant. It is only when obstetric complications arise that she should need higher-level (i.e. secondary or tertiary) referral. Such ongoing contacts with the health system imply a continuum of care which has to be well-coordinated. Of course, community and traditional perspectives on MNH will co-exist alongside the formalised health system, but an ideally-functioning primary health care system will be sensitive to these. Primary health care services should aim to be accessible, acceptable, effective, efficient and equitable to those whom they serve (WHO, 2006)

[1] The subsequent chapters use the earlier estimates of 451/100,000.

While it has been noted that the need for health system strengthening is a prerequisite in achieving health-related MDGs from the standpoint of health system inputs (i.e. health workforce, health information systems, health finances and health commodities) (Travis et al., 2004), almost no attention has been placed on health system *organisation* – that is, how the health system is arranged, designed and structured in order to meet its functions. The governance of district health systems – as how and where decision-making occurs – has been little-studied in health system strengthening (Hill & Hupe, 2002; Scott et al., 2014), and certainly not at all in MNH service delivery. Governance (and by extension, stewardship, leadership and management) is a complex concept; altogether, these are concepts that have been made further opaque in the health literature partly because they are concepts which have largely been borrowed from other sectors. The landmark World Health Report on Health Systems Performance (2000) argued that stewardship (as oversight) is possibly the most important of the four health system functions (the other three being resource creation (investment and training), service delivery (provision), and financing (collecting, pooling and purchasing)), as it influences the other functions, and makes the attainment of health system goals possible. The World Health Organisation further developed the idea of stewardship towards leadership and governance at the centre of the six health system building blocks (WHO, 2007a). Governance determinants, that is, the factors that affect decision-making and thus the actions and behaviours of individuals and organisations, in turn influence health system performance (Savedoff, 2011). While there are various definitions of health governance, we like the one put forth by Brinkerhoff and Bossert (2004) which explicitly positions governance determinants within the dimensions of power and politics: "*Governance is about the rules that distribute roles and responsibilities among government, providers and beneficiaries and that shape the interactions among them. Governance encompasses authority, power, and decision making in the institutional arenas of civil society, politics, policy, and public administration*". It follows, then, that governance of the district health system – who makes decisions, how are they made, when are they made, why and how – impinges directly upon MNH performance. Curiously, debates about achieving MDGs 4 and 5 and improving district health systems have rarely intersected; they have been like two ships passing in the night. This is intriguing considering that MNH status within a country is often an indicator of the country's health system performance (Sajedinejad et al., 2015). Furthermore, as health development issues, MNH and district health systems (or primary health care) have been on global agendas for roughly the same period of time – they have in essence 'grown up' together. The focus on district health systems was much stronger twenty-five years ago with programmes such as the Strengthening District Health Systems which gave primacy to the district as the functional vehicle for service delivery (Cassels & Janovsky, 1995; WHO, 1987, 1988). Yet in many low- and middle-income countries the strength of the district health system has waned. District health systems currently receive too little policy attention (Salam et al., 2014), and increasingly, interest in understanding why the district health system has fallen short of its promises is re-emerging (Meessen & Malanda, 2014).

As the actors responsible for overseeing service delivery, district managers are many things: they are policy implementers, resource stewards, supervisors and leaders. They interface

between national government and community-level ends of the health system. Within their decision-making about the district is the continual process of policy action through their multiple roles of policy interpretation, managing and leading. Typically, managerial scope focuses on operational plans, reporting structures, and effective and efficient service delivery, whereas leadership aims towards adaptation, inspiration, and alignment of vision (J. Mansour et al., 2005). While management and leadership can be distinguished theoretically, at the operational level of the district, they in fact converge in practice (Daire et al., 2014). The World Health Organisation defines good management and leadership as: *"providing direction to, and gaining commitment from partners and staff, facilitating change, and achieving better health services through efficient, creative and responsible deployment of people and other resources"* (WHO, 2007c). Studies have demonstrated that robust management and leadership are important for MNH implementation effectiveness (Frost & Pratt, 2014; Nyamtema et al., 2011; Ross et al., 2005) and MNH quality of care (Raven et al., 2011). However, weaknesses in management competencies and leadership capacities at all levels of the health system, but particularly at district-level, have been cited as bottlenecks in scaling-up services and achieving the MDGs (Ghana Ministry of Health et al., 2011b; WHO, 2005, 2007b, 2009b). It is important, therefore to understand the dynamics of district manager decision-making. This matters because their multiple responsibilities and functions as bridges between policy formulation and implementation confer upon district managers a certain degree of accountability for ensuring district performance. Furthermore, understanding how and whether interventions designed to increase managerial capacities for leadership and decision-making are critical in improving the efficient implementation of those interventions, ultimately for greater and more meaningful impact.

This research presents an alternative perspective on the lack of progress witnessed on MDGs 4 and 5 in Ghana. Rather than attending to the more technical aspects of supporting MNH improvements – the "hardware" of clinical, logistical, and infrastructural inputs, which are of crucial importance – the study herein examines issues of "software": district-level governance, in particular its management and leadership functions. This is to understand whether the health system in Ghana is itself organised sufficiently to deliver MNH services. The evidence suggests that perhaps it may not be.

STUDY OBJECTIVES AND RESEARCH QUESTIONS

This research is a part of the larger project: "*Accelerating progress towards attainment of MDGs 4 and 5 in Ghana through basic health systems function strengthening*". This was a five-year global health policy and health system research initiative funded by the Netherlands Organisation for Scientific Research/ Science for Global Development (NWO/WOTRO) from 2011-2015. The overarching aim of the "ACCELERATE" project was to promote reduction in maternal and infant mortality by developing and evaluating approaches for accelerating attainment of MDGs 4 and 5, with interventions aimed at strengthening the basic health system functions of organisation and the delivery of essential and quality health services, human resources management, and governance and clinical decision-making related to MNH. Theorising the need to have a multi-level, inter-related health systems

approach to implementing effective MNH-improvement policies and programmes led the "ACCELERATE" project design to three main sub-themes: frontline worker clinical decision-making, mid-level governance and policy implementation, and national-level policy development. This thesis reflects work conducted within the second sub-theme.

Our objectives were to deepen understandings of district-level management, leadership and decision-making for policy and programme management and implementation at the district-level interface, and its implications for accelerating attainment of MDGs 4 and 5: how does district manager decision-making function to create favourable conditions to support achievement of MDGs 4 and 5 (or not)? Secondarily, we sought to understand how management and leadership capacities can be strengthened to better support policy and programme implementation. It was hypothesised that as the level with oversight for frontline MNH staff, their decision-making in how they interpret, translate and support implementation of national-level policies and programmes will have some influence on MNH service delivery.

Specifically, we posed these research questions:

1. How and why do district managers make decisions with regard to implementing MNH policies and programmes?
2. Does the Leadership Development Programme, many of whose principles are implicitly based on continuous quality improvement lead to strengthened district management and leadership, and improved decision-making? Why or why not?
3. What lessons can be learned regarding design and implementation of interventions to support decision-making for desired outcomes in MNH?

The questions are deceptively simple; in our investigation we found they gave way to a multitude of reasons, variables and effects.

STRUCTURE OF THE THESIS

The thesis is structured as follows:

Chapter 2 introduces the theoretical foundations and methodological approaches taken to answer the study questions. An overview is given on how this thesis is positioned within, and contributes to the applied field of health policy and systems research. The chapter then goes on to present the theoretical perspective which underpins the research (critical realism), and the bodies of theory which are drawn upon and blended to make the analytic arguments: policy implementation theory, organisational management theory, and complexity theory. As a way of conducting the study of complex interventions in complex contexts, we present our selection of realist methods as appropriate for answering our study questions. We describe the phases of our study design in-depth. The chapter ends with a description of the research setting.

Chapter 3 describes the policy contexts in which district manager decision-making occurs to understand how these dynamics influence district-level management and leadership in one district in the Greater Accra Region. By enlarging conceptions of management and leadership beyond the individual manager to encompass systemic interactions (using complex leadership theory), we demonstrate that the dominant modes of top-down planning (i.e., strong hierarchical authority) and resource uncertainty promote a type of management and leadership at district level which gears district-level management towards serving the bureaucracy of the health system instead of enabling managerial responsiveness to emerging district-level MNH challenges. The relevance of this chapter is in its defence of 'weak' district-level management and leadership, demonstrating it to be an expression of the character of the system, not solely attributable to individual managerial capacities. Our theory development in this chapter acts as an initial step towards evaluating the introduction of a management and leadership programme intervention later (see Chapter 7).

Chapter 4 refines and validates our theorising on district manager decision-making. By employing a questionnaire across the entire Greater Accra Region we seek to measure and describe the wider generalisability of our initial findings. The results are largely concordant with earlier findings, yet we are able to nuance our understanding further. Critically, this chapter presents the challenges of accountability for district managerial decision-making as they relate to organisational complexities.

Chapter 5 delves into an historical analysis of decentralisation processes in Ghana to explain the evolution of the district health system and current configuration of district manager decision-space. Given the importance of pattern-searching, and the temporal quality of context, this was a necessary step. The chapter shows how over time, policy feedback mechanisms in the broader democratic governance of the country have had strong centralising tendencies, which have in turn influenced decision-making within the health sector, and more specifically, the development of the district health system. Such tendencies have been influenced by the sequencing of decentralisation processes, which have privileged national-level interests vis-à-vis the district-level. This has resulted in power balances favouring the national-level through strengthened vertical accountabilities and resource dependencies. As such, the bottom-up genesis of the district health system has been reversed, and district manager decision-space has contracted over time, thus moving away from the original district vison of primary health care.

Chapter 6 makes the linkage between the policy contexts of district manager decision-making and the practice contexts of frontline provider decision-making by presenting the challenges of multiple interactive issues affecting frontline MNH clinical decision-making. The chapter makes the link to the broader ACCELERATE project, and identifies the mix of tacit knowledge, guideline availability and client influences that frontline providers employ in providing MNH services, within a context of systemic resource constraints. The chapter underscores the reality of conditions which managers must steward and provide management and leadership oversight capacities for in the delivery of MNH services, and implies the degree of responsiveness required. Furthermore, the chapter points to the

insufficiency of a management and leadership type which is bureaucratic, and thus non-responsive in nature.

Chapter 7 revisits the existing policy context of district manager decision-making to evaluate the implementation of the Leadership Development Programme (LDP) in the same district explored in Chapter 3. All programme interventions are always introduced into pre-existing contexts. Therefore, based on our earlier theorising, we investigate possible explanations between (1) the organisational contexts of hierarchical authority and resource uncertainty, (2) the mechanism of the LDP (i.e., its programme theory) to strengthen management and leadership and lead to improved decision-making, and (3) and the lack of observed institutionalisation of the learned management and leadership practices (or evidence of any other residual organisational change) as a result of LDP introduction over the medium-term.

In **Chapter 8** the thesis concludes with a discussion of the experiences and lessons on using realist evaluation methodology in the study setting for the questions we raise, and on the MNH policy and program implications for sustainable ways of improving district-level governance. We begin with the implications of our findings. Then we reflect on the experiences and lessons of undertaking such a research approach to addressing our research questions. The accumulated evidence of these chapters points to the need for transformational health systems change which can empower district managers to be more responsive and efficient in policy implementation. This necessarily involves addressing the tensions between the individual and the system in emerging patterns of management and leadership. Therefore recognising systemic capacities for management and leadership will require different types of capacity strengthening interventions – such that can promote systemic learning to enable greater creativity and innovation – to be identified and implemented. Moreover, within the global MNH agenda, the current dominance of top-down 'accountability' interests of supra-national actors poses a difficulty the strategic operation of the district in achieving MNH performance targets. This will need a serious look to accelerate progress on increasing the impact of district managers as leaders, and not simply managers of top-down directives. Finally, we discuss possibilities for 'real change' in the ongoing debates of revitalised decentralisation in Ghana.

CHAPTER 2.

Theoretical and methodological considerations: Complexity and realism in health systems

"Though the regional policy will be there, but you being at your level, you know your terrain, you know how it is. When it's coming to your level, you look at the terrain and if you can do something about it, then you do it". (A district manager)

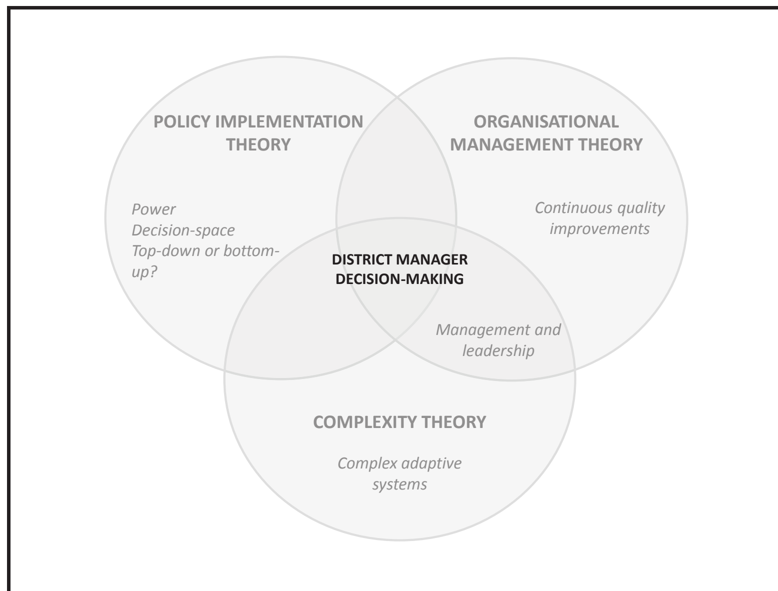
ADDING TO THE FIELD OF HEALTH POLICY AND SYSTEMS RESEARCH

This thesis is firmly rooted in the emerging and inter-disciplinary field of health policy and systems research (HPSR). This is territory which spans both health policy and health systems study, with the objectives of addressing system function and influencing policy change (Gilson, 2012). Primarily, HPSR is distinguished by its question-driven nature. As such, its starting point is not methodologically-based, but rather seeks out methods to support the research questions. This emphasises the inherent need for deeply contextualised study. HPSR accentuates the nexus where technical solutions (traditionally clinical, biomedical, epidemiological and economic) meet the political and social constructions which make up the human, financial and material systems organised to deliver health (Gilson et al., 2011). Until now, the field has focused much more on national and even supra-national programme delivery; less attention has been paid to understanding the existing dynamics of subnational service delivery (Sheikh et al., 2011). While the field of HPSR continues to grow, particularly in low- and middle-income countries, a need has been identified to build greater analytical depth, further contextualisation and explanatory focus, and more rigorous application of existing policy theories and frameworks (Gilson & Raphaely, 2008; Walt et al., 2008). This thesis, in addressing questions of governance and policy implementation through an understanding of the organisational dynamics within which policy implementation occurs, aspires to make a modest contribution to the field of HPSR by answering this call. We use as our point of departure the priority of understanding health system contexts to support systemic change. It has been highlighted that considering people and their agency (i.e., their decision-making) at the centre of their health systems requires contextualised understandings (Sheikh et al., 2014). What is new herein is our application of complexity theory to unpack understandings of governance interactions at the district managerial interface, an often-forgotten domain. In the MNH literature, this is particularly absent. Thus, this thesis seeks to link national policies to their performance outcomes through the medium of district managers, embedding the decision-making of district managers to the organisational contexts in which they operate.

THEORETICAL UNDERPINNINGS

The intricate nature of decision-making indicated to us early on that understanding its dynamism would require more than one lens or viewpoint. As such, this research draws on and combines three distinct bodies of theory upon which to base a coherent analysis: policy implementation theory, organisational management theory, and complexity theory (**Figure 2.1**). Questions of policy implementation are necessarily organisational: organisations, with their people and processes *"are real"* and they exist in *"problematic, non-straightforward"* ways (Boal et al., 2003). Moreover, we sought to engage with complexity theory (as embodied in complex adaptive systems) in view of the fact that accounts of 'health systems being complex' have become almost like bromides, with little theoretical appraisal of the actual meaning and implications of such complexity.

Figure 2.1: Overlapping bodies of theory for this thesis



This research is rooted in an ontological position of critical realism. The realist position, existing somewhere on the spectrum between positivism and relativism, holds that reality indeed exists and is independent of its being perceived, however all observations are unavoidably filtered through the observer (Boal et al., 2003). Realism is distinct from positivism in that it seeks to *explain* phenomena rather than predict them, and separate from relativism in that multiple interacting causes may consist of multiple truths yet have 'real', that is, verifiable outcomes. The realist position, most importantly, acknowledges that knowledge claims are indeed fallible – they are tentative, and thus subject to revision on the basis of new evidence (Boal et al., 2003). Byrne (1998) notes that: "*the product of complex and causal mechanisms may not be directly accessible to us… [T]he real may not become actual because the causal mechanisms are complex and contingent and the effects may be blocked. The actual may not become empirical because it is not necessarily observed*". As such, complex phenomena, like the study of organisations, consist of both that which can and cannot be directly observed. Therefore understanding the causal pathways which underpin such complexity requires both inductive and deductive reasoning.

POLICY IMPLEMENTATION THEORY

The study of policy implementation has been concerned with associations between planned interventions as they have been formulated as policies or programmes, and the dynamics of their outcomes (Winter, 2003a). O'Toole has referred to policy implementation as "*what develops between the establishment of an apparent intention on the part of the government to do something, or to stop doing something, and the ultimate impact in the world of action*" (2000). It has regularly been observed that the 'policy implementation gap' between intention and

outcome has confounded even the best policies (Wildavsky & Pressman, 1973). Two main perspectives on policy implementation dominate the literature. 'Top-down' approaches view a rational, linear process of implementation as a purely technical issue, following national-level policy formation. This is in contrast to 'bottom-up' approaches which privilege the discretion of frontline service providers to the communities they serve. Lipsky's characterisation of frontline providers as 'street-level bureaucrats' is the seminal work which makes this point: that frontline providers can themselves offer an alternative to the top-down bureaucracy of an organisation (1980). It is also interesting to highlight the conflict that street-level bureaucracy raises between frontline providers and their managers: while managers are more tied to the structures and processes of the organisation, frontline staff may have more 'room to manoeuvre'.

This dichotomy of top-down and bottom-up policy implementation has run into criticisms. While top-down approaches tend to be concerned with government capacity through a preoccupation with organisational structures and socio-economic contextual influences, bottom-up approaches tend to privilege the beliefs, relationships and inter-organisational dynamics of policy implementers (Buse et al., 2005). Yet separating them ignores more complex realities. Models which attempt to bridge top and bottom have encompassed the entire scope of policy action from national-level formulation to beneficiary outcomes (Winter, 2003b), or proposed policy actors across the spectrum to form separate groupings bounded by their own values, norms and logics (Sabatier & Weible, 2007). Given that policy implementation at its core is about how people implement processes, relational perspectives are necessary. Power, as Dahl defines it (1968), is the causal relations between actors which affect their actions. An analysis of power, then, is able to deepen understandings of those actors involved in policy implementation, and the contextualised factors which drive their actions and interactions (Gilson, 2005). In policy implementation theory, top-down expressions of power have been conceptualised as 'hierarchical' or 'authoritative' power: the emphasis of higher-level authorities on enforcing the coordination, control and alignment of lower-level actors to achieve policy goals (which are most often identified at the top) (Erasmus & Gilson, 2008; Lehmann & Gilson, 2013). Of course, from a district managerial perspective, managers are also capable of exerting their own power influence on policy implementation processes, by opposing policy directives, or even endorsing them (Gilson et al., 2014b). How much discretion district managers have available to them is also bounded by formal organisational processes and structures, informal 'rules of the game', and how these rules are negotiated and enforced: contestation, cooperation, competition and contradiction become key interactions. Bossert (1998; 2002) has well developed the concept of 'decision-space', the notion that at district level, the 'range of choice' local actors have available to them over various functions affects performance and innovation.

ORGANISATIONAL MANAGEMENT THEORY

The organisational management literature is vast, and for our purposes we identified one particular thread of relevance to management and leadership, service delivery and organisational (or system) change: continuous quality improvements (CQI). CQI grew out of

the industrial sector to become popular in American healthcare in the 1980s before appearing in low- and middle-income countries in the 1990s (and is also referred to in the literature as total quality management). CQI is both a management philosophy and approach. It is based on the assumption that problems within the organisation are not clinically, nor administratively rooted, but rather are systemic in nature and arise out of a structural inability of the organisation to perform as intended (McLaughlin & Kaluzny, 1994). CQI is itself a complex intervention. It has as its main aim to establish quality as a key priority in management practice, to shift management's role to one of creating a system able of producing quality outcomes, and to empower employees to make and take decisions (Spencer, 1994). CQI is composed of several components and requires many considerations. First, CQI is focused on improving quality amongst individuals within the organisation (internal customers) and individuals outside the organisation (external customers). Second, CQI needs certain parameters to be in place to ensure successful implementation, such as total commitment to the processes, a well-articulated vision and mission, clear understanding by all participants of how it applies to their own settings, time and patience (McLaughlin & Kaluzny, 1994). The implementation of CQI must be supported by management, yet must be sufficiently organic to enable ideas and innovation for improvement to arise from all quarters of the organisation. Management becomes facilitators of the quality process – but this requires managers at all levels, not only top-management (Lukas et al., 2007). While CQI consists of tools and processes to support standardisation and structuration of data collection, analysis and use, reduction of variation in outcomes, and organisation-wide participation (Shortell et al., 1995), it also promotes innovative problem-solving – systems thinking – by addressing the underlying structural obstacles. This "inherent duality", the distinct and conflicting principles of control, uniformity and standards, versus creativity, innovation and learning on which CQI is based, is extremely important to consider (Anderson et al., 1994; Dooley et al., 1995; Sitkin et al., 1994). As CQI is always implemented within an organisation's own context – its history, cultural norms, and values – it is this context that will drive whether CQI implementation focuses on the former or the latter, and whether it stimulates organisational control or creativity.

This dual nature of CQI has led to ambiguity in the literature on the organisation-wide sustainability of CQI. Kaplan et al (2010) refer to the "*significant conceptual and methodological feebleness in the literature on CQI sustainability on transformative organisational change in health systems*". More recently, systematic review of CQI implementation in low- and middle-income countries has provided little evidence of sustained practice of CQI (Dettrick et al., 2013). Blaise and Kegels (2002) demonstrated that CQI implementation resembling vertical programmes with 'toolkit' approaches dampens sustainability. In Ghana, there is growing evidence of the utility of CQI-type approaches for improving MNH services and health systems performance (Agyepong et al., 2004; Agyepong et al., 2001; Awoonor-Williams et al., 2015; Mshelia et al., 2013; Srofenyoh et al., 2012; Twum-Danso et al., 2012; Twum-Danso et al., 2014), but issues of sustainability have not yet been investigated. Critically, while the literature is thick on the effectiveness of CQI on process-improvement, there is lacking evidence about how contextual factors influence the 'optimisation' of CQI in a given organisation (Brennan et al., 2012).

COMPLEXITY THEORY

In light of a critical realist ontology, complexity theory as an epistemology emphasises the importance of context in a holistic manner. Complexity theory is a way of linking macro-structures which can be seen, measured and evaluated to the micro-inducements which are told and interpreted. Complexity theory has evolved, not as a single science, but as several streams (for example chaos theory, or dissipative theory), all of which focus on within-system holism, non-linearity and feedback mechanisms of different types. Complexity theory has variously been applied to the fields of ecology, immunology, thermodynamics, computer science, physics, and more recently to the social sciences such as economics and sociology (Stacey et al., 2000). In this study we draw upon the theory of *complex adaptive systems*, which is based on analysing the interactions between all elements of a system: the people (agents), the processes and procedures (structures), and the norms, values, history, and capacities which bind them, and in which they are embedded (Stacey et al., 2000). This is not unlike Giddens' social theory of structuration (1984), however we use complex adaptive systems theory to explore the nature of the interactions themselves. Complex adaptive systems are defined as having a large number of individuals who interact with one another and the systems' structures, sending and receiving 'cues' or signals over time (Holland, 1992, 2006). These signals come from the micro-interactions between individuals and are said to be emergent because they arise out of the interactions, and self-organising because they take past learning into account (Dooley, 1997; van de Ven & Poole, 1995). As these signals are reproduced over time (or produce new signals), the system adapts and evolves. These signals, however, move through the system over time and space in ways that are unpredictable (i.e. not pre-determined) and non-linear because they stem from local interactions between agents having "*individuality, along with some degree of intentionality, consciousness, foresight, purpose, symbolic representations, and morality*" (Funtowicz & Ravetz, 1994). Because complex adaptive systems are also open systems, they are subject to the influences of the broader systems in which they exist. Due to the non-linear adaptation of signals, and external contextual influences, the future in complex adaptive systems is essentially unknowable.

Organisational life swings between stability and change. Managers, with their expertise and skill, whether learned or intrinsic, are expected to understand these conditions, and either control for them or make use of them. Bridging complexity theory to the organisational management literature, Stacey and colleagues (2000) argue that traditional approaches within management theory have yielded incomplete answers to the persistent problem of organisations: namely that the best planning does not negate the appearance of unforeseen eventualities. Often, organisational processes enable a continuity of dysfunction. Most contemporary management approaches are derived from early 20th century models of efficiency, inspired by principles of equilibrium, determinism and reductionism (Dooley, 1997). Classical management science originates in machine metaphors, and conceives the manager as being outside of the observed phenomenon of the organisation. As a result, the manager, with 'correct' knowledge and tools, is able to act objectively upon the organisation by implementing rational managerial prescriptions. The challenge with this approach to management is that by separating the manager from the organisation it ignores the

interactions of the manager as part of the system within which they are embedded. As such, understandings of the systemic tensions which sustain stability and change are lost.

In its treatment of leadership theory, the application of complex adaptive systems has also been compelling. The contribution of complexity theory to the leadership discourse has been to expand conceptions of leadership beyond what has traditionally been rooted in psychology, which conceives leadership as being personal attributes and influence, towards a more contextually-driven approach (Lichtenstein & Plowman, 2009; Lichtenstein et al., 2006; Marion & Uhl-Bien, 2001; Osborn et al., 2002; Schneider & Somers, 2006). Within complex adaptive systems leadership is linked to what emerges from systemic interactions; it is *"an outcome of relational interactions among agents"*, socially constructed by the evolving and adapting context of the system over time (Lichtenstein et al., 2006). Referred to as 'complex leadership', leadership as an emergent of systemic interactions transcends the individual to become a systemic phenomenon – the pattern of leadership we observe over time.

HOW TO STUDY POLICY IMPLEMENTATION AND MANAGEMENT AND LEADERSHIP IN COMPLEX ADAPTIVE SYSTEMS?

Given these three theoretical bodies, how does one study policy implementation at the organisational level in a complex adaptive system, or furthermore the effects of interventions into such contexts? For our purposes we consider the district health system as a complex adaptive system; here, district manager decision-space is our unit of analysis. Within the district health system we acknowledge that the constantly shifting tensions between the individuals and the structures of the system which inform decision-making make study difficult. Thus we employed a realist approach to enable us to engage with analytical cycles of theory-building, testing, and validation.

REALIST APPROACHES AS A WAY OF EXPLAINING

The realist position has given way to growing methodologies for research. The influential text by Pawson and Tilley (1997) puts forth methodological approaches which can probe why policy or programme change does or does not occur, and in what conditions. As realist approaches maintain method-neutrality – meaning they can support different data collection methods, granted they fit the research question (i.e., they can be either qualitative or quantitative) – their power is in their orientation of inquiry, moving past questions of 'did the policy or programme work?', towards more contextualised questions of 'how did the policy or programme work (or not), for whom, and in which conditions?'. In this way, realist approaches link explanatory theories of causal pathways (that is, the mechanisms of context-driven change) to the people and processes (that is, agents and structures) involved in implementing the policy or programme (Pawson, 2002). In realist terminology this is referred to as developing context-mechanism-outcome (CMO) configurations. While realist approaches have primarily been used as an evaluation method in high income countries in

other social fields (including education and criminology), a growing body of HPSR studies in low- and middle-income countries is employing realist approaches (Goicolea et al., 2012; Hernandez et al., 2014; Marchal et al., 2010; Marchal et al., 2012; Prashanth et al., 2014; Prashanth et al., 2012; Van Belle et al., 2010; Vareilles et al., 2015). In this thesis we purposely distinguish between the terms 'realist evaluation', which have traditionally denoted the evaluation of a policy or programme (usually as intervention), and 'realist approach' which implies the broader investigation of the contexts, mechanisms and outcomes of our phenomenon of interest. In this study our programme intervention evaluation constituted only a portion of our overall examination of district manager decision-making, hence our choice of 'realist approach'.

The realist investigation begins with the formation of a middle range theory (MRT). The MRT is a 'fairly plausible' theory, gathered from existing theory from the literature, past actor experience, and if necessary, some initial exploratory research. Such a process is meant to unearth the 'folk theories' of those actors involved in implementing the policy or programme of how they think it brings about change (i.e., how it 'works'), what the expected outcomes are and what the moderating factors might be (Pawson & Tilley, 1997), thus linking the 'real' (i.e. the policy or programme) with the unobserved. Once validated with actors, the MRT becomes the working hypothesis to be 'tested' in the explanatory case. The data collection yields evidence on contexts, mechanisms and outcomes, which are configured and further validated with actors. It is in the gathering of new evidence to either support or refute the MRT that it is refined through further investigation. Thus realist approaches are of particular utility when the aim is to generate a more explanatory perspective on what happens when an intervention is introduced into a given context. This is important because though many interventions maintain 'theories of change', few of them are context-specified.

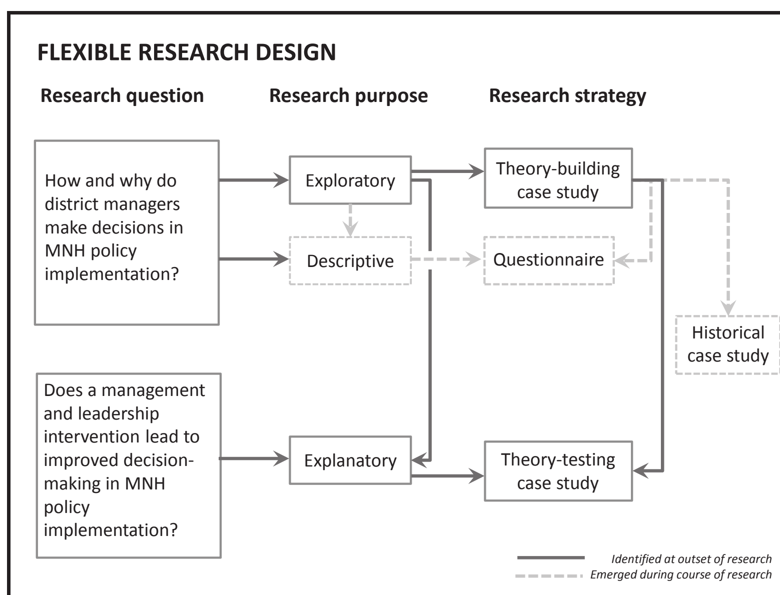
RESEARCH METHODOLOGY: AN EMBEDDED REALIST CASE STUDY

For our purposes, given the complexity of the phenomenon of decision-making we wished to understand, and our attempts to uncover the existing contextual layers to explain that phenomena, a case study methodology was amenable to an organisational study asking 'how' and 'why' questions (Yin, 2014). While case study designs have been criticised for their weak external validity and attribution power, from a realist perspective, it is in the repetition of testing the theory – what is referred to as 'cumulative validation' – which builds up its validity; as cycles of theory-building, theory-testing and theory-refinement are repeated, the accumulated evidence revises the knowledge claim. Therefore we sought to 'embed' multiple cases in an overall realist case to understand the contexts, mechanisms and outcomes of district managerial decision-making in the Greater Accra Region.

The research sought to understand better, through exploration and explanation, the context-based factors which influence district manager decision-making in the course of implementing MNH policies and programmes. Secondly, in light of the implementation of the LDP (a CQI-based intervention to strengthen managerial and leadership capacities), we

sought to evaluate whether such an intervention improves managerial decision-making or not in the given context. The research was conducted in phases to address the different purposes underlying each research question. We situated the research to require a flexible research strategy, based on emergent findings driven by the research questions. As such, our research was conducted in three phases: an initial exploratory phase which sought to uncover possible theories to account for the observed dynamics in district manager decision-making, a second phase of 'theory-testing' to explain the outcomes of the programme intervention, and a third phase of theory-refinement and validation. These phases were not linear, but rather grew out of phase 1 and cycled over one another iteratively, allowing for adaptation of data collection tools and further analysis (**Figure 2.2**).

Figure 2.2 Thesis study design



Phase 1 was structured with an exploratory purpose in mind. Part of our exploration was to understand the balance of power at the district-level interface: what kind of decisions do managers make when implementing MNH policies and programmes? How much discretion do managers have to make these decisions? What are their challenges and what is easy? How do they normally negotiate with their superiors at the regional-level, and their subordinates within the district – are they compliant or are they combative? What kinds of working processes do they normally reject or accept, and why? What are the structures and procedures in place? How do things *really* work within the district to support MNH policy and programme implementation?

The ACCELERATE project randomly selected 3 districts of the Greater Accra Region (one rural, one municipal, and one sub-metropolitan area) to pilot a CQI-based management and leadership strengthening intervention for MNH service delivery. Dangme West was the rural district randomly selected. Thus we began by constructing a qualitative study in a

single district of the Greater Accra Region in Dangme West. The selection of a single district, while it presents limitations in generalisability of the findings to other contexts, was a crucial first step in undertaking an analysis that was rich enough with thick description to enable adequate, contextualised theorising of how managerial decision-making might be occurring. We subsequently used the theory developed here on district manager decision-making to be tested across the region later (see Phase 3).

The case study consisted of a 10-month period of participant observation, where the researcher was embedded within the district health management team (DHMT) daily, participating in regular activities, supervisory visits to the district hospital and sub-districts, district and regional management meetings, and informal organisational interactions. Documents relevant to MNH policies, reports, protocols and guidelines at national, regional and district level were reviewed inductively to give an understanding of the overall formal policy context. Semi-structured interviews were held repeatedly with district management. Data from interviews consisted of managerial roles vis-à-vis MNH policy implementation, influencers of decision-making, organisational risks and uncertainties and scope for autonomy. These data were used to develop a theory of managerial decision-making within the district, which was subsequently presented and validated by district managers. The case study was conducted from November 2011 – September 2012.

What grew out of our interactions with district managers was an acute sense that the current configuration of managerial decision-making had not always been such, that there had been subtle changes in the power and autonomy of district managers and district functioning as a whole over time. Such structural changes seemed to have important implications in explaining why district manager decision-making is as it is today. Thus we constructed a historical case study to analyse the broader systemic interactions impinging on district manager decision-making. We collected data through a non-exhaustive literature review of the democratic governance literature on Ghana's decentralisation and development of the health sector, and historical archives. Coupled to key informant interviews with high-level officials (many of whom have retired or left the Service), these yielded understanding on how decentralisation processes and health sector reforms have shaped the functioning of the district health system and the decision-making of those who function in it. The case was conducted from September 2013 – August 2014.

Phase 2 was explanatory in its purpose to employ theorising from Phase 1 to inform the evaluation of the Leadership Development Programme (LDP) – a programme intervention to strengthen management and leadership. From the outset of the ACCELERATE project, it was envisioned that a CQI-based intervention would be developed and tested as an approach to improve managerial capacities and processes, through adaptation of pre-existing manuals that were used in prior empirical work in the Greater Accra Region in the late 1990s and early 2000s. In evolving with the developments of the health system (and reflecting the real-time implementation nature of HPSR), another management and leadership intervention was being implemented in the Greater Accra Region. While not an explicit CQI programme, the LDP (J. Mansour et al., 2005) is implicitly based on CQI principles. The LDP is a Management Sciences for Health programme that was sponsored by

the Ghana FOCUS Region Health Project (funded by the United States Agency for International Development and implemented by JSI Research and Training Inc.). The LDP had previously been adopted sporadically by the Ghana Health Service as its programme for strengthening management and leadership. A cascaded approach was taken by the Ghana Health Service to scale-up the LDP in various regions at various times. Though the LDP had been introduced in some districts of Greater Accra in 2010, its timing to be scaled-up in Greater Accra to specifically address improving MNH outcomes coincided with the ACCELERATE project. Thus the LDP became the CQI-based intervention to be assessed within this study. We were interested less in conducting an impact assessment of the LDP (i.e., to measure its effectiveness), as literature reflects its impact in other settings (M. Mansour et al., 2010; MSH, 2011; Perry, 2008; Seims et al., 2012); rather we wanted to understand in our particular context, *how* did the LDP bring about the organisational outcomes we observed.

Based on our earlier theorising from Phase 1, we developed a middle range theory (and an alternate hypothesis) to explain how the LDP would 'work' (i.e., bring about change) given the context, and to be 'tested' against the data. The researcher participated in the 6-month LDP intervention: training workshops, coaching visits with the facilitation teams, and district teams LDP activities. Document review of all LDP training materials, LDP reports from previous cycles in other regions, and district team LDP presentations and action plans was conducted inductively. Semi-structured interviews were conducted with all participating district teams, the regional management team and LDP facilitators to collect data on how participants perceived the LDP was implemented, how they thought it worked, what organisational changes had taken place as a result of the LDP, and other concurrent initiatives. Interview and observation also took place after the end of the LDP to understand any systemic changes. The case study was conducted from February 2012 – August 2013.

Phase 3 emerged out of Phase 1 as further validation of our theorising on district manager decision-making. We aimed to shift from the theoretical generalisability we developed in our single exploratory case study in Phase 1 towards greater analytical generalisability across all the districts of the Greater Accra Region. Thus Phase 3 was based on a descriptive purpose, and involved the shift from qualitative to quantitative methods. Based on our earlier conceptual framework, we re-articulated our MRT on the factors influencing district manager decision-making. Our goal here was to see if we could measure the effects of the relationships between these factors. We did this through the development of a Likert scale to be administered as a questionnaire. A Likert scale was identified as an appropriate way of measuring individual manager perceptions of organisational factors which may be influencing their decision-making. The questionnaire was administered across all DHMTs of the Greater Accra Region. During pre-testing it became clear that district managers were keen to explain their responses to the closed questionnaire, so we modified the instrument to enable qualitative (open) responses which were subsequently analysed inductively. The result is a mixed-methods analysis. The study was conducted from November 2014 to February 2015.

RESEARCH SETTING

The Republic of Ghana is located in West Africa, a nation of 25 million people, bordered by Togo to the east, Burkina Faso to the north, Cote D'Ivoire to the west, and the Gulf of Guinea to the south. Ghana has three distinct ecological zones: humid tropical in the southern third of the country, savannah in the middle belt, and sahelian conditions in the northern-most third. Richly endowed with agricultural, mineral and oil resources, Ghana is West Africa's second largest economy and Africa's sixth largest (African Development Bank, 2012). The country's traditional exports have been gold, cocoa and timber; oil was discovered in 2008. The Gross Domestic Product is USD 48.1 billion with an annual growth rate of 7.3% (World Bank Data 2013). Ghana's poverty rate is 24.3%, and inflation currently stands at 11.6% (World Bank Data 2013).

Ghana has Portuguese, Dutch and British colonial history. The country was the first sub-Saharan country to gain its Independence (from the British) in 1957. After a period of sequential military and civilian rule from 1966 to 1992, Ghana has settled into a stable constitutional democracy with a multi-party political system. Across the continent Ghana has been popularly referred to as a 'beacon of democracy', a model of open society with an active media. Ghana is divided into 10 administrative regions and (most recently) 216 districts. Nearly half of the population lives in rural areas. In general, the southern half of the country tends to be more densely populated; the northern regions are larger in land mass, less populated, and tend to be more economically depressed. Literacy levels are high nationally (74.1%) with variations occurring across regions. Life expectancy at birth in Ghana is 61 years for men and 64 years for women (WHO, 2014). The country's sex ratio (male: female) is 95.2, signalling more women in the country than men. Ghana is a nation of diverse ethnicities and religious affiliations.

Ghana has a pluralistic health system. Public sector health service delivery is provided by the Ghana Health Service (GHS), an agency of the Ministry of Health (MOH). The GHS, while being the largest employer of the health workforce (Ghana Ministry of Health, 2007), is not the only health service provider. In large urban areas, there is a thriving private-for-profit sector. There is also a large private-not-for-profit sector mainly consisting of mission hospitals as part of the Christian Health Association of Ghana (CHAG), the second largest health workforce employer. Additionally, there are traditional providers. The operation of the GHS is guided by Ghana Health Service and Teaching Hospitals Act (525) (Republic of Ghana, 1996). This delegation of service provision oversight from the MOH to the GHS sought to decentralise decision-making away from central government. Oversight powers for teaching hospitals, CHAG facilities and quasi-public facilities (such as military and police hospitals) remain separate. Thus responsibilities for public facilities within districts are administratively decentralised (i.e., deconcentrated), down national, region and district lines. However, decentralisation in the health sector was preceded by broader political decentralisation (i.e., devolution) of public services within districts to District Assemblies, as envisioned in Local Government Act (462) (Republic of Ghana, 1993). Health services within districts are overseen by the district health management team; as such district-wide management support, including financing, budgeting and planning is important to affect

service delivery. In this regard, collaboration with District Assemblies is equally important in providing infrastructural support and encouraging community participation (Ghana Ministry of Health, 2008).

THE GREATER ACCRA REGION

The most recent census indicates the capital city region of Greater Accra to be the second-most populous region, with 16.3% of the nation's population (Ghana Statistical Service, 2012). Greater Accra is the most densely populated region of Ghana, with 1,236 people per square kilometre in 2010, as compared to 895.5 people per square kilometre in 2000 (Ghana Statistical Service, 2012). High rates of in-migration from other areas of the country, and even other countries is a factor, since the Total Fertility Rate of 2.5 is the lowest in the country (Ghana Statistical Service et al., 2009a). As a result Greater Accra has a wide diversity of inhabitants. The region is divided into 16 districts. It has one teaching hospital, one regional hospital, seven government hospitals, six quasi-government hospitals, many other types of hospitals (including CHAG/Islamic, and approximately 100 private hospitals), and numerous health centres, polyclinics and maternity homes (Ghana Health Service, 2013). However, conditions at many lower-level (i.e. primary health care) facilities within districts, such as insufficient equipment, instruments and commodities, staffing, and in some cases running water and electricity, make it challenging to provide basic services. This in turn affects institutional capacities to provide comprehensive services required to manage obstetric or neonatal complications (Ghana Ministry of Health, 2014b). Emergency Obstetric and Neonatal Care (EmONC) remains poor in many areas. Infrastructure such as surgical theatres and products crucial for obstetric complications, such as blood transfusion and oxygen supplies, are often not in place. The National EmONC assessment indicates severe gaps in the number of basic and comprehensive facilities across the country (Ghana Ministry of Health et al., 2011a). The trend for institutional MMR has only fluctuated, and not significantly decreased in Greater Accra since 2003 (Ghana Health Service, 2010).

From the routine health information system, the regional profile for select MNH indicators signals a few key issues (**Table 2.1**) (Ghana Health Service, 2013). First, antenatal coverage (ANC) across the region is quite high, though drops in nearly every district for the recommended 4+ visits. This reflects issues of accessibility, such as distance from the facility, and state of the roads during seasons. Some districts with greater than 100% coverage signal areas where the influx of registrants means they in fact live elsewhere. Second, on maternal mortality, districts reporting zero deaths often indicate places where there is no referral hospital. There remains a tension across the region about the "merry-go-round" syndrome, and perceptions of complicated obstetric cases being referred late from districts, thus arriving at higher-level facilities with poor prognoses. The fact that the health information systems capture the institution in which the mortality occurred (and not where it was referred from) remains an issue of debate in regional performance review meetings. Third, skilled delivery is generally low, and traditional birth attended-births remain high in some

areas. Finally, recent concerns of increasing teenage pregnancies have re-encouraged policy attention on adolescent health.

Table 2.1: Select regional MNH indicators, by district

District	Population	ANC coverage (%)	ANC 4+ visits (%)	MMR	Skilled deliveries (%)	Teenage pregnancy (%)
Ningo-Prampram	75,661	86.2	40.7	0	32.0	15.8
Ga East	160,305	64.3	58.8	0	34.3	2.6
Kpone Katamanso	105,901	58.9	66.3	0	26.0	6.5
Ada West	62,335	60.9	19.4	0	15.3	16.0
Ga South	418,812	69.5	49.4	0	28.9	7.6
Ga Central	113,410	62.4	62.9	0	30.0	4.9
Shai-Osudoku	58,957	136	53.9	55.7	76.7	12.8
Tema Metro	335,345	122.8	69.1	18.2	90.0	6.6
Adentan Municipal	85,717	45.4	49.2	0	18.0	2.2
Ashaiman Municipal	209,289	114.9	45.4	0	64.0	7.5
La-Nkwantanang-Madina Municipal	124,268	172.1	73.2	145.2	110.9	5.5
La Dade-Kotopon Municipal	224,215	98	45.2	132.4	76.7	6.9
Accra Metro	1,801,705	86.5	98.8	323.3	63.1	6.8
Ada East	81,005	76.5	37.7	66.7	46.0	15.3
Ga West	287,942	62.6	57.9	21.9	39.6	8.3
Ledzokuku-Krowor	249,794	73.1	80.7	111.9	44.4	5.1

Source: GHS Annual Reproductive and Child Health Report (2013)

Dangme West is one of four rural districts within the Greater Accra Region. After the enumeration exercise of 2012, Dangme West was split into 2 districts: Shai-Osudoku and Ningo-Prampram (for the purposes of this study we refer to Dangme West, as it was when the data were collected, except for in chapter 7, which collects data from all current districts of Greater Accra). The district is rural with 4 sub-districts. It has three main road networks which pass through it and are in good condition. Other small roadways are in variable condition, and in some areas are impassable during the rainy season. Poverty is widespread in the district. Petty trading and subsistence fishing and farming are the predominant occupations. The district has one district hospital, 4 health centres, 6 private facilities, and a dozen Community-based Health and Planning and Service (CHPS) compounds, which are primary health care oriented outreach services to better link the community to the health system. Traditional birth-attended deliveries accounted for 14.5% of the total deliveries in the district (Dangme West District Health Management Team, 2012).

POLICY CONTEXT IN THE HEALTH SECTOR

The overarching policy framework is the Health Sector Medium Term Development Plan (HSMTDP) 2014-2017. The Plan has six objectives, summarised in **Table 2.2**. These health objectives are unchanged from the previous HSMTDP (2010-2013):

Table 2.2: National Health Objectives, 2014-2017

HO1	Bridge the equity gap in geographical access to health services
HO2	Ensure sustainable financing for health care delivery and financial protection for the poor
HO3	Improve efficiency in governance and management of the health system
HO4	Improve quality of health services delivery including mental health services
HO5	Enhance national capacity for the attainment of the health-related MDGs and sustain the gains
HO6	Intensify prevention and control of non-communicable and other communicable diseases

Source: Ghana Health Sector 2014 Programme of Work (2014)

General government expenditure on health as a percentage of total government expenditure was 12.5% in 2012 (WHO, 2014). In 2014 the health sector had an approved budget of GHc 4,280,318,322, as set out in the Budget Statement (Ghana Ministry of Health, 2014a). Consisting of both discretionary funds and a statutory allocation from the National Health Insurance Fund, the proportions are set out in **Table 2.3**:

Table 2.3. 2014 Health sector resource envelope by source of fund (in GHc '000)

Source of Funds	Amount	Percent (%)
Discretionary Funds		
Government of Ghana	1,208,823	28.2
Internally Generated Funds	1,363,622	31.9
Development Partner	781,262	18.3
Statutory Funds		
National Health Insurance Fund	926,610	21.6
Total	4,280,318	100

Source: Ghana Health Sector 2014 Programme of Work (2014)

Of the discretionary funds, goods and services comprise 44.9%, employee salaries consists 30.9%, and assets 24.1%. Ghana's wage bill is a significant part of its health expenditure, which affects overall service budgets (Republic of Ghana, 2011). The move to a 'single-spine salary structure' has been a part of a long-standing tension surrounding staff remunerations which has had sector-wide reverberations (Agyepong et al., 2012).

Earlier analyses have highlighted sectoral challenges to service delivery within the Ghanaian health system, for example poor staff motivation affected by staff shortages, delayed promotions, and insufficient equipment and infrastructural supports to conduct work

(Agyepong et al., 2004); and infrequent, fragmented, and centralised in-service training focused on vertical programmes (Agyepong, 1999).

THE NATIONAL HEALTH INSURANCE SCHEME

The landscape of Ghana's health financing system has altered considerably since the introduction of the National Health Insurance Scheme (NHIS) in 2003. Much has been written about its implementation (a selection only includes: (Agyepong & Adjei, 2008; Jehu-Appiah et al., 2011; Witter & Garshong, 2009)). Ghana's NHIS is held up globally as a model, one of a handful of low- and middle-income countries with a national financial protection scheme towards universal health coverage. However, challenges in its implementation do exist. For instance, delays in insurance reimbursements to facilities are often identified as a bottleneck by staff in running services (Agyepong & Nagai, 2011; Sakyi et al., 2012). Secondly, issues of what is contained in the coverage package are often debated. In the case of newborn health, it is only the first, and not subsequent postnatal care visits that are covered. Similarly, care for pre-term of ill babies is not comprehensive. These facts have implications for supporting access to newborn health services (Ghana Ministry of Health, 2014b).

CHAPTER 3.

What governs district manager decision-making? A case study of complex leadership in the Dangme West District, Ghana

"The moment the policies come from the Region, we as the implementers need to implement it. There is no influence whether to say I will implement it or not. Since it has come from the Region you need to go about it. As an implementer I can't say this one I wouldn't do it or this one I will do it. The main reason is since it is coming from the Region and that is what is brought to you to implement you need to go by it. So the moment it steps into our facility we start implementing it. So we don't have any influence on that". (A manager of a district health team)

ABSTRACT

Management and leadership in complex health systems have been little addressed as contributors towards improving maternal and newborn health. Widespread perceptions of weak district-level management and leadership have encouraged capacity strengthening interventions with a predominant focus on individual rather than systemic capacities. However, both types of capacities matter. Greater understanding is required about how managerial decision-making and policy implementation are influenced by the systems in which managers operate. This paper presents an exploratory case study to understand the balance of top-down and bottom-up dynamics influencing district manager decision-making in one district in the Ghanaian health system. Our enquiry was theory-driven, drawing on concepts of decision-space, power and trust from the literature. Data collection methods included document review, participant observation and semi-structured interviews. Using analysis that drew upon complex leadership theory, we found that contexts of hierarchical authority and resource uncertainty constrained district manager decision-space. These constraints also gave rise to a leadership-type oriented towards serving the bureaucratic functions of the health system (more top-down than bottom-up). The analysis of this case study showed that as a result, district-level management and leadership were less responsive to maternal and newborn health service delivery challenges.

KEYWORDS
Management; complex leadership theory; district health system; maternal health; governance

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INTRODUCTION

In health policy and systems research, management and leadership are complex but related phenomena. They have various meanings and requirements (Daire et al., 2014; Frenk, 2010). The World Health Organization defines good management and leadership as "*providing direction to, and gaining commitment from partners and staff, facilitating change and achieving better health services through efficient, creative and responsible deployment of people and other health resources*" (WHO, 2005). In low- and middle-income countries, widespread perceptions of weak management and leadership at district-level have prompted calls to increase managerial capacities (Bach, 2001; Filerman, 2003; WHO, 2007b, c, 2009b). Over the years, there have been several management and leadership capacity strengthening initiatives in Ghana directed towards improving the district health system. Examples include the Strengthening District Health Systems Initiative (Cassels & Janovsky, 1995), the Leadership Development Programme (J. Mansour et al., 2005; MSH, 2011; Perry, 2008), and certain health sector reform activities (Chatora & Tumusiime, 2004). However, weaknesses in management and leadership have continued to be predominantly attributed to individual competencies rather than health system challenges (Curry et al., 2012; Kwamie et al., 2014; Seims et al., 2012).

As the interface between national-level policy formulation and sub-district service delivery, district-level health managers have multiple responsibilities for policy interpretation, resource management, and leading frontline staff. District managers serve a boundary function, communicating information up and down the health system. They provide a "*framework within which health services can be delivered*" (Green & Collins, 2003). By virtue of their mandates of appropriate planning, budgeting, monitoring and resource deployment, district managers are ultimately accountable for realising district performance. Thus the manner in which they make their decisions is significant. Deleon (1998) cites decision-making as "*the central organisational act*", yet there are few studies in the health system literature that examine district managerial decision-making and function (Dieleman et al., 2011; Scott et al., 2014).

Policy implementation at the district level is influenced by contextual factors that are both internal and external to the district. Policy implementation theory has traditionally been held from two poles: (1) 'top-down' approaches that view rational, linear processes of implementation as purely technical, following national-level policy formation (Hill & Hupe, 2002); and (2) 'bottom-up' approaches, such as Lipsky's characterisation of frontline public sector staff as street-level bureaucrats (Lipsky, 1980). Top-down approaches are concerned with institutionalised structures of governmental capacity. Bottom-up approaches privilege beliefs and inter-organisational dynamics of policy implementers. In complex adaptive systems, such as district health systems, systemic interactions give rise to patterns that modulate the entire system (Holland, 2006). Whether district-level policy implementation exhibits top-down or bottom-up characteristics will be influenced by interactions between national and regional structures and district-level organisation, and will subsequently give rise to capacities and

patterns that we call management and leadership. How these different factors interact remains unclear.

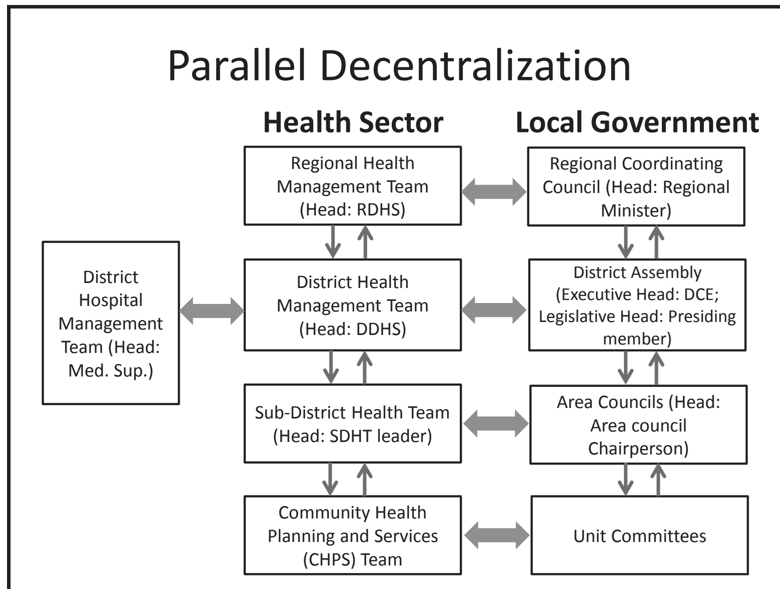
This paper presents an exploratory case study to examine how and why district managers in one district in the Ghanaian health system make decisions with regard to implementation of maternal and newborn health (MNH) policies. Specifically, our objectives were to understand the balance of top-down and bottom-up MNH policy implementation. MNH policies were identified because the maternal health profile of a country is often indicative of the performance of its health system (Sajedinejad et al., 2015). As a general service delivery function, MNH requires many different health system elements to be functional and working in concert at various points across the health system. However, the bulk of MNH interventions to date have focused on infrastructural, technological, or clinical inputs (Gil-González et al., 2006). Less attention has been paid to the contributions of management and leadership (Blaauw et al., 2003; Nyamtema et al., 2011; Oduro-Mensah et al., 2013; Penn-Kekana et al., 2004; Ross et al., 2005). This paper seeks to fill part of this knowledge gap.

Ghana, a West African country of 25 million, is a stable constitutional democracy. A multi-party political system has existed since 1992. In 2012 (the year of study) Ghana's Human Development Index ranking was 135 out of 187 countries (Malik, 2013). The Gross Domestic Product was USD 48.1 billion, with annual economic growth of 6.0%. Ghana is classified as lower-middle income. The country is divided into ten administrative regions and (at the time) 170 districts. More than half of the country's population lives in rural settings.

Ghana's public sector health service delivery is provided by the Ghana Health Service, an agency of the Ministry of Health. The Ghana Health Service is regulated by the Ghana Health Service and Teaching Hospitals Act (525) of 1996, and has a mandate "*to provide and prudently manage comprehensive and accessible health services with special emphasis on primary health care at regional, district and sub-district levels in accordance with approved national policies*" (Republic of Ghana, 1996). The Ghana Health Service has shifted administrative decision-making (i.e., deconcentration) down national, regional, district and sub-district lines. This means that the district health management team (DHMT), district hospital and sub-districts report up to the district director of health services, who reports to the regional director of health services, who in turn reports directly to the Director General of the Ghana Health Service. The district director heads the DHMT, the medical superintendent heads the district hospital, and sub-district heads lead sub-district health teams. The relationship of the medical superintendent to district director remains somewhat ambiguous, with a general perception that it is a peer-to-peer rather than superior-subordinate relationship. The district health system is also guided by local government political decision-making (i.e., devolution) to District Assemblies in accordance with the Local Government Act (462) of 1993. Apart from reporting to the regional director, the district director also reports to the District Chief Executive at the District Assembly. The matrix organization of the district health system is meant to strengthen reporting between health and local government sectors. Instead, tensions between Acts 462 and 525 have blurred the lines of vertical and

horizontal accountability (Agyepong, 1999; Couttolenc, 2012), thus presenting challenges to district-level management and leadership. In particular, greater power and influence appear to dominate the relationship between district and regional levels of the Ghana Health Service, as compared to district health teams and local government. Understanding the implications of these constitutional governance elements to the evolution of the district health system is significant, and we analyse them elsewhere (Kwamie et al., 2015b). The matrix organization of the Ghana health system is depicted in **Figure 3.1.**

Figure 3.1: Matrix organisation of the Ghana Health System



Ghana is in "Stage II" of its obstetric transition (Souza et al., 2014): maternal mortality due to direct causes remains high (MMR 380/100,00) (WHO et al., 2014) despite increased accessibility to maternity care services (Ansong-Tornui et al., 2007; Bosu et al., 2007; Penfolds et al., 2007). Similarly, neonatal mortality rates have stagnated around 30 deaths per 1,000 live births and contribute significantly to under-five mortality (Ghana Statistical Service (GSS), 2009). The 2010 Ghana Millennium Development Goals (MDGs) report indicates that the country is on track to meet all MDGs except 4 and 5 (Government of Ghana National Development Planning Commission, 2010).

METHODS

Conceptual Framework

In decentralised contexts, Bossert's decision-space model (Bossert, 1998; Bossert & Beauvais, 2002) provides a framework to describe the range of choice local decision-makers have available. Such choice is bounded by formal rules and the contestation, negotiation, and enforcement surrounding them. Decision outcomes arise based on how centralised or localised decision-making is. Our study assumes that the quality and nature of relationships between district managers and other policy actors influences the balance of top-down and bottom-up dynamics. Managerial relationships are particularly relevant given the multiplicity of relationships managers must maintain in order to enact and implement policies. This includes relationships among themselves and with other district departments (horizontally), with staff and communities (vertically-down), and with regional management and the District Assembly (vertically-up). From what is already known about health system relationships, we considered power and trust to be key determinants. While there are many forms of power, our initial observations suggested that *hierarchical or authoritative power* was of critical importance in the study setting, thus we focused on understanding its role in decision-space. Top-down power in implementation theory (referred to as hierarchical or authoritative power) is often emphasized as coordination and/or control of lower-level actors by higher-level authorities with their own policy goals in mind (Erasmus & Gilson, 2008; Lehmann & Gilson, 2013). Hierarchical authority is legitimized by lower-level actors when they believe in the rights of higher-level actors (Astley & Sachdeva, 1984). In contrast, *bottom-up discretionary power* resists or subverts formal controls (Lipsky, 1980). Trust can be defined as "confident, positive expectations regarding another's conduct" (Lewicki et al., 1998). Organisational trust is also a coordinating/cooperation mechanism, bound to perceptions of risk, vulnerability, uncertainty, motivations, expectations of competence, and fulfilment of responsibilities (Gilson, 2006; Kramer, 1999).

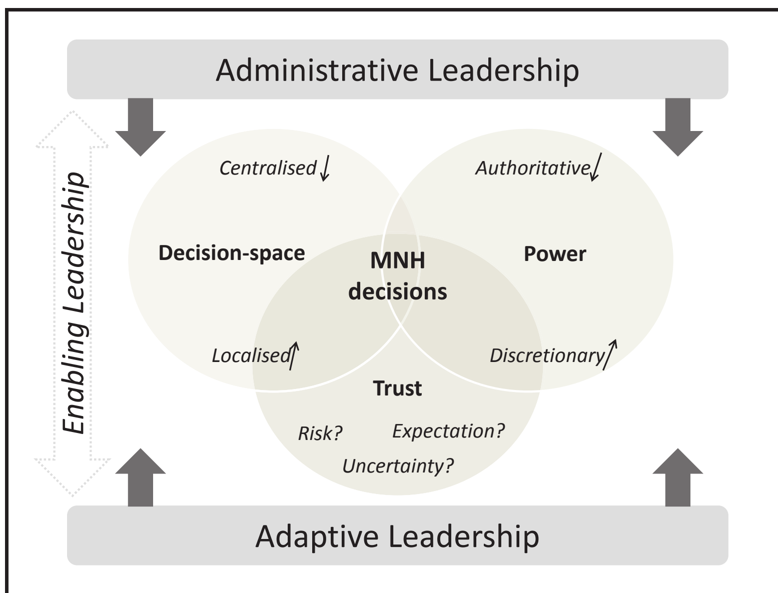
Combining these concepts in a non-exhaustive policy implementation framework, we proposed that localised versus centralised decisions (i.e. decision-space), authoritative versus discretionary decisions (i.e., power), and organisational expectations, uncertainties and risks (i.e., trust) intersect to influence district-level decision-making, our outcome of interest. This initial framework guided our preliminary analysis.

Based on our preliminary findings, and to better incorporate uncertainty and complexity in our analysis, we returned to complexity theory. Complexity theory aims to shift understandings of phenomena away from cause-and-effect rationale (Marion & Uhl-Bien, 2001). The implications of complexity theory require conceptual expansion of management and leadership discourse beyond traditional approaches that typify managers as outside the system with objective abilities to act upon the system (Dooley, 1997; Stacey et al., 2000). Complexity theory moves towards greater contextualisation of management and leadership associated with emergent elements stemming from systemic interactions. Thus, management and leadership transcend the individual's personal attributes and skills to instead become a phenomenon of the system

(Lichtenstein & Plowman, 2009; Lichtenstein et al., 2006; Marion & Uhl-Bien, 2001; Osborn et al., 2002; Schneider & Somers, 2006; Uhl-Bien et al., 2007).

Complex leadership theory, according to Uhl-Bien et al., (2007) acknowledges that complex contexts have unknowable futures that cannot be controlled for. At best, managers create enabling conditions for constructive, but largely unknown future states. Distinguishing between authoritative top-down elements, and emergent bottom-up elements, the authors propose three leadership types which emerge in complex adaptive systems. *Administrative leadership* is largely driven by top-down structures and pays most attention to bureaucracy, hierarchy, control and alignment; managerial roles are focused on formal planning and coordination actions to achieve organisational goals. *Adaptive leadership* is focused on creative actions which promote learning and innovation, often linked to bottom-up generative acts. *Enabling leadership* attempts to bridge administrative and adaptive functions, allowing them to work in concert rather than in opposition. All three leadership types co-exist and interact in a system. When system interactions are predominantly based on authority (hierarchical power), leadership is often more top-down, and can suppress the adaptive functions of creativity, innovation and learning (Uhl-Bien & Marion, 2009). When system interactions are based on actor discretion (including expertise), leadership dynamics are more bottom-up and adaptive. Thus we refine our conceptual framework **(Figure 3.2)**, and present our results through this frame.

Figure 3.2: Conceptual framework for the case study



In drawing upon complexity theory and focusing on system-level interactions, we acknowledge the importance of personal leadership attributes (including individual competence, knowledge,

expertise, skill, experience, character, and so on). These are important elements in understanding district-level management and leadership, and should be considered part of systemic interactions (Day et al., 2014). We have, however, focused this study on understanding what we consider to be the relatively neglected area of systemic influences on decision-making and the type of leadership likely to emerge out of these systemic interactions.

Based on the exploratory nature of our research, we maintained a flexible research design to influence our data collection and enable analysis of emergent findings. To answer our research question with thick description, we followed a qualitative case study design to enable us to probe the context of the district as integral to our investigation (Yin, 2014).

This study was part of a larger project across the Greater Accra Region of Ghana to investigate health system approaches to achieving MDGs 4 and 5 (2011-2015). It was conducted from November 2011 to September 2012, and involved initial in-depth qualitative study focused on a single district to inform future research. In the larger project, three districts in the region (reflecting sub-metropolitan, municipal and rural characteristics) were randomly selected for the pilot of an intervention to strengthen district management and leadership for MNH services[2]. Of these project districts, Dangme West district was purposively selected to study the context of MNH policy implementation in a rural district.

At the time of study, Dangme West had a population of 162,145, and consisted of four sub-districts. Poverty was widespread, and the district was considered to be typical of rural disadvantaged districts in southern Ghana (Dangme West District Health Management Team, 2012). Dangme West had one district hospital, four health centres, seven private facilities and twelve primary health care outreach compounds. There was a total of 329 Ghana Health Service staff posted to the district, six of whom were doctors, 10 were physician assistants, and 28 were midwives. In line with national-level health objectives, improving access to quality maternal, neonatal, child and adolescent services was a key strategic objective (Ghana Ministry of Health, 2012). Antenatal coverage in the district was 81.7%, skilled delivery 36.7%, and postnatal coverage 59.8%, reflecting slightly lower averages than the national figures. Only the district hospital was classified as offering comprehensive emergency obstetric and neonatal care (EmONC) services; two facilities were classified as partially EmONC, and four were classified as non-EmONC (Ghana Ministry of Health et al., 2011a). Two of the four sub-districts regularly do not refer obstetric cases to the district hospital due to being too distant. Rather, they refer to contiguous districts, one of which is in the neighbouring Eastern Region.

We defined 'district managers' as: (1) members of the DHMT, (2) members of the district hospital management team, and (3) sub-district heads. These actors were identified because they

[2] At the time of the study, the Greater Accra Region was divided into ten districts, two of which were rural. In October 2012, new districts were created across Ghana as part of the enumeration exercise. Currently the Greater Accra Region is organised into 16 districts, two of which are run as six sub-metropolitan areas.

are the top management officials responsible for decision-making related to organising MNH service delivery within the district.

We used a single case in our methods. While this has the disadvantage of weak external validity, realist approaches (Marchal et al., 2010; Pawson & Tilley, 1997; Prashanth et al., 2014) address these methodological criticisms through processes of 'cumulative validation'— repeated cycles of theory-building, testing and refinement. Realist approaches seek to probe complex causal linkages between actors and structures of a system, thus offering explanations for observed outcomes. By beginning a case with a middle range theory that is refined through emerging evidence and actor-validation, the theory becomes a working hypothesis to be further "tested" in different settings and subject to further refinement. It is in the repetition and refinement of the case study findings that realist cases build up their external validity and attribution power. For our purposes, such an approach had the advantage of allowing deeper understanding of a complex issue. This was an essential first step in developing our middle range theory for a subsequent realist evaluation (Kwamie et al., 2014).

Data Collection and Analysis

For information on the overall policy context, we reviewed recent (since 2000) national-level policies and reports (national health policy, human resource strategy, reproductive health strategic plan, health sector gender policy, maternal health survey, MDG acceleration framework, national EmONC assessment, and Ministry of Health annual reports). For service-level direction, we reviewed MNH-specific guidelines and protocols (safe motherhood service protocols, maternal health/death audit guidelines, and referral guidelines). For strategic planning, we reviewed national-level Programmes of Work and district-level performance review reports (Programmes of Work 2011, 2012; independent reviews 2009; 2010). To cover operational activities during the study period, we reviewed weekly DHMT and monthly regional management meeting minutes. Documents were reviewed inductively.

The study also included participant observation that lasted ten months and involved the first author being embedded daily within the DHMT. For the duration of the study period, the first author participated in regular activities of the DHMT, including daily procedures, supervisory visits, district-wide MNH-related training workshops, weekly DHMT and monthly regional management meetings, as well as semi-annual and annual planning meetings. Data were collected on how district managers interpret national-level strategic directives, distribute and use MNH-related resources, organise and deliver MNH-related staff trainings, develop the district Programme of Work, and relate with key stakeholders. Notes from observing managerial interactions and decision-making processes were recorded.

The study included interviews with 12 district managers, representing all managers with responsibilities for MNH in the district. Respondent characteristics were as follows: three

respondents were male, nine female. Respondents had been in their current postings for less than one year (n=2), between one and three years (n=5), and between three and five years (n=5).

Based on the conceptual framework, interview guides were developed to understand: (1) managerial roles in various aspects of MNH policy implementation; (2) influencers of decision-making; (3) expectations, risks and uncertainties linked to other actors; and (4) scope of autonomy for decision-making. Interviews were conducted January–February 2012. Interviews were conducted privately at the workplace and lasted between 45 and 60 minutes. Data collection continued with follow-up questions until thematic saturation was reached (Guest et al., 2006).

To validate researcher-interpreted findings, we held a workshop with district managers in September 2012. To facilitate discussion on MNH decision-making, we used Net-Map (Schiffer, 2007) to visualise actor influence. NetMap helps identify, describe, and analyse actor inter-relationships that influence a given outcome. Managers brainstormed all key actors involved in MNH decision-making, the different types of decisions involved in MNH, how each actor was linked to those decisions, and the relative importance of each actor to each decision-type. The process was meant to elicit, thereby confirming or refuting the 'flow' of MNH decision-making, and how influential each actor is pertaining to various types of decision (i.e., resource allocation and planning/programming). Managers' review and feedback validated and refined the study's conceptual framework, as described below.

Observational field notes were converted into transcripts on the same day of observation. Audio-recorded interviews were transcribed verbatim by a research assistant and converted into transcripts. All transcripts were subsequently cleaned and uploaded to the Atlas.ti© qualitative analysis software (Atlas ti, 2002-2015), where they were coded against start-code lists developed from the initial conceptual framework, as well as themes emerging from the data. Data were triangulated across document review, participant observation and interview data, and across district manager type to find convergent thematic patterns. Preliminary analysis of findings within the research team allowed for fine-tuning of categories and adaptation of questions in follow-up interviews and informal discussions with managers.

Ethical approval for this study was granted by the Ghana Health Service Ethical Review Committee (GHS-ERC: 09/11/11). Managers were made aware of the participant observation period prior to its commencement. Informed consent was obtained for all interviews. Each respondent was advised of the anonymity of the interview, and their right to quit involvement at any time. Permission was sought to audio-record interviews.

RESULTS

This analysis of managerial decision-making in the Dangme West district found greater patterns of administrative leadership compared to adaptive and enabling leadership.

Examples of administrative leadership: constrained resource decisions

The study found that district managers are significantly constrained in their human resource decision-making. Human resource management, including salary payment, is primarily controlled by the national level, which posts staff to regions, and regions through to districts. Districts do not have authority to recruit or fire Ghana Health Service staff, but managers do have discretion over where within the district staff are posted. Managers indicated that the lack of scope to hire and fire staff, with the exception of casual employees, presented challenges in disciplining them:

> *This is a system where somebody misbehaves and even if you talk about it then you get problems. [...] People refuse to go to work and when you take action nothing is done to them. (Sub-district head 3)*

Consensus among district managers indicated widespread perceptions of insufficient numbers of staff posted to districts, especially midwives. This created a dynamic of DHMT and district hospital dependence on the region, and separate lobbying for more staff. The lack of greater influence over human resource decisions for district managers was perceived as compromising MNH service delivery.

Financial resource decision-making for district managers is also constrained. The district health directorate receives financial allocations for dispersal across sub-districts through several streams. Government of Ghana funds pass through both the District Assembly (i.e., administrative funds) and the regional-level Ghana Health Service (i.e., service funds). Development partner funds, often earmarked for vertical programmes, pass from regional to district level. It is only facilities that can amass internally-generated funds from services and medicines. These are paid for out-of-pocket by service users or reimbursed through the National Health Insurance Scheme (Agyepong & Nagai, 2011). Facilities have full discretion to use their internal funds on operational costs; frequently, small portions of these funds are used to support DHMT activities since the DHMT itself does not generate funds. Sub-districts co-manage their finances with the DHMT, while the district hospital maintains its own account. This results in the DHMT having greater supervisory control over sub-districts than the district hospital. According to DHMT respondents, the proportion of funds received at the directorate is approximately 15% government of Ghana (10% service, 5% administrative), and 85% development partner funds. Such slanted proportions were perceived to erode programming flexibility and responsiveness. District managers did view one health sector strategy, the High-Impact Rapid Delivery (HIRD) funds, which provided the DHMT with discretionary funding for MNH interventions as particularly useful, because funds supported administrative running of the directorate. While HIRD funds were viewed positively, DHMT managers complained of

their irregular disbursements. The status of HIRD fund continuity at the time of study was unclear.

Challenges in timely disbursement of both Government of Ghana and development partner funds, compounded by delays in national insurance reimbursements, further compromised district manager decision-making:

> *Since 2010, the government has no money. We have fruitless budgets – you prepare them beautifully, exhaustively, then have central government tell you there is not money. We are fed up. [The budget] is like a toothless dog. (DHMT member 6)*

District managers perceived the District Assembly as being minimally involved in DHMT, district hospital and sub-district decision-making. Relations with the District Assembly, particularly in district planning and budget preparation, remained ad hoc and personality-driven. The existing relationships, however, were viewed as beneficial for lobbying purposes for a variety of resource inputs, such as donating buildings, and providing equipment and transport as needed for routine campaigns.

Examples of administrative leadership: limited local planning decisions

District managers noted that national-level health objectives are developed with initial data coming from routine health information from sub-districts and districts, and disseminated back to the sub-districts and districts for implementation. As such, managers reported that they had a more active role in local planning. They based their plans on identified priorities from previous annual reports, data from the routine health information system, and intimate knowledge of what occurs at the sub-districts. However, development of the district Programme of Work through the use of national-level templates fed through the region still created perceptions of planning decisions being identified by national and regional levels, and subsequently "disseminated" to the district. These sentiments were reinforced by mapping key MNH policy implementation decisions. This displayed the bulk of decisions as being "one-way," emanating out of national and regional Ghana Health Service levels, and flowing downwards through the district. This hierarchical authority was consistently noted in the relations between district managers and the region:

> *The region is the top, is number one. They channel the information through the district before it comes to us and we also channel it to our sub-districts. So that hierarchy is there. That is how it normally flows. (Hospital management 2)*

Managers reflected that the difficulties they faced with implementing plans and protocols were partly as a result of insufficient training in management and leadership, but also from conflicting policies:

> *We follow what [the region] want us to do. The only problem is...the in-charge went for a*

workshop to prevent pre-eclampsia, [to learn] that we should stock the dispensary with hydralazine. Meanwhile, I am a physician assistant...in the new treatment guidelines, I am not supposed to use those drugs. So, as [both] a physician assistant [and] a midwife of course, I'm not supposed to use it. Then you tell me that the straight midwife can use it? Don't you see it's a problem? (Sub-district head 1)

Examples of adaptive and enabling leadership

The study found fewer examples of bottom-up decision-making by district managers. Some interesting episodes of adaptive and enabling leadership were identified. Hospital staff, for example, emphasized community collaboration to design radiant warmers for newborns when the hospital could not afford to import them:

We are not a big hospital. We don't have everything or most of the things like other hospitals but in our own small ways I think we are doing our best. [...] We have one man, and he does the local one for us. If you come to our maternity ward you could see that it's a local-manufacture one. While people are using the imported ones we are using the local ones just to improvise to make life comfortable for mother and baby. (Hospital management 1)

Widespread managerial trust, both laterally across the district health system and towards regional management, was another bottom-up dynamic. District managers clearly reported, and it was observed, that trusting regional management enabled them to carry out implementation directives under resource-constrained conditions. Trusting that regional management was making the right decisions enabled district managers to follow-through as best as they could. Managers linked trust of the region to a sense of respect for their authority:

They are our leaders. The mere fact that they are in a higher position, we respect them for that. (DHMT member 4)

Managerial confidence was also associated with regular communication channels. Formal communications such as monitoring and supervisory visits, reports, letters and memos, and informal communications, such as telephone calls and emails for clarification and discussion of issues, and planning meetings and workshops, facilitated district-wide networking.

DISCUSSION

This paper uses a contextually-based analysis of management and leadership in one district in the Ghanaian health system to show the challenges posed by a predominance of top-down policy development and implementation. While actors in a system are inter-dependent, these dependencies can be distorted by conditions of resource unavailability, and uncertainties surrounding resource possession, utilisation, regulation and access (Pfeffer & Salancik, 1978).

Coordinating mechanisms meant to direct and maintain systemic tensions can also pose difficulties when such mechanisms result in greater and not less organisational uncertainties. Fattore and Tediosi (2013) draw on cultural theory to explain that hierarchical forms of governance privilege rule-bounded social cohesion, and thus minimise the perspective of the individual. Pfeffer and Salancik (1978) further argue that power consolidation over resources, while unavoidable, is only problematic when the ability to assemble equal, opposing power, is limited.

This study sought to investigate managerial interactions through the prism of complexity, thereby expanding our understanding of district-level management and leadership to include the organisational contexts in which managers are embedded. We found that centralised decision-making around resources and limited local planning influenced management and leadership towards attending to the bureaucratic functions of the system (through coordination, control, alignment and hierarchy). This resulted in reduced capacity for district-level responsiveness towards MNH policies. What emerges are management and leadership patterns that are more administrative and less adaptive/enabling in their orientation. We recognise that there is a vast literature on individual leadership typologies (e.g., charismatic leadership, transformational leadership, visionary leadership). While we do not seek to negate the role of the individual manager, our study does suggest that a deeper appreciation of contextualised decision-making is important. Such analysis relates district managerial actions to the organisational structures that bind them (Sheikh et al., 2014), and advocates for systems reform that encapsulates both individual and systemic capacity strengthening towards improving weak management and leadership.

Few studies frame MNH improvements through an operational governance lens. It is of note that a significant amount of manager responses reflected their preoccupation with broader health system arrangements instead of MNH-specific matters. Our findings underscore that system organisation upstream to clinical concerns are also important in supporting MNH policy implementation. If district managers are to effectively coordinate, organise and plan MNH services, the systems in which managers find themselves must be organised so as to support managerial capacities to be responsive. Recognition of tangibly decentralised district-level governance, and strengthened management and leadership of MNH as a strategic priority has been made in Ghana and elsewhere (Frost & Pratt, 2014; Ghana Ministry of Health et al., 2011b). New ways of thinking are required to shift more policy attention, and greater political, administrative and fiscal commitment to the district-level (A. Asante et al., 2006a; A. D. Asante et al., 2006b; Sakyi et al., 2011; Salam et al., 2014).

What are the lessons for health system reform? By applying complex leadership theory to an understanding of district management and leadership, our analysis suggests that district managerial capacities need to be reconceived from being competency-based weaknesses only. MNH services require supportive health systems that enable managerial freedoms and empowerment to respond creatively to district challenges. Rigid and non-responsiveness

organisational structures in African health systems have been shown elsewhere to be ill-suited to achieving district performance, and contributors to poor quality of care (P. Blaise & Kegels, 2004).

How can adaptive and enabling leadership be fostered more broadly? It has been observed in emergent social systems that where bottom-up interactions with plenty of information exchange and minimal central coordination exist, they give rise to higher-level system change (Lichtenstein & Plowman, 2009). Leadership actions that encourage such emergence include embracing novelty and uncertainty, becoming catalysts for and supporting collective action, fostering networking and network-building, thinking systemically and making sense of what is occurring, and integrating contextual constraints (Marion & Uhl-Bien, 2001). In practice, this will mean allowing for more emergent resource allocation and scope for strategic planning to occur within the district itself. We note this in the separation between district-wide and district hospital decision-making: the greater degree of choice available to the district hospital as a function of its internally-generated funds, compared to limitations faced by the DHMT, enables a particular independence.

We note limitations in our study. First, we recognise that while the evidence presented herein reflects a more systemic perspective on MNH, it does not delve into the idiosyncrasies related to clinical MNH decision-making. This is important, given that that management and leadership issues do influence clinical decision-making of frontline staff (Oduro-Mensah et al., 2013). Second, the paper does not enter deeply into matters of accountability. This is a limitation, as studies have considered that disproportionate internal or bureaucratic accountability can impair external, or community accountability, a critical element in ensuring community-based MNH interventions (Cleary et al., 2013). Furthermore, different forms of accountability—be they for control or for improvement—will emphasise different organisational procedures, incentives, and elements of autonomy and learning. Issues of accountability, both individual and systemic, as they relate to the context of district management and leadership, would be important in further analysis.

CONCLUSIONS

This analysis of one district in Ghana found that in the context of a prevailing top-down orientation to policy implementation, the decision-space of district managers was constrained by hierarchical authority and resource uncertainty. This pattern gave rise to a predominant administrative type of leadership geared towards serving the bureaucratic function of the health system. This appears to have had consequences for managerial responsiveness in MNH service delivery. While adaptive and enabling forms of leadership were less present, bottom-up dynamics of trust and respect for regional management countered organisational uncertainties to support policy implementation. Similar patterns of decision making may or may not exist in

other Ghanaian districts. The refinement of our conceptual framework informs ongoing research to validate its wider generalisability.

CHAPTER 4.

A governance of uncertainty: Realist investigation of district manager decision-making in the Greater Accra Region of Ghana

"As a manager it is my duty to ensure that the right thing is done. When the policies are being brought from the top we have to make sure that it is implemented because if it is not implemented and any bad news or anything bad happens, I as a manager will be held responsible..." (A hospital manager)

ABSTRACT

Understanding health system organisation is an important part of building evidence on implementation effectiveness for improving maternal and newborn health (MNH). This article describes findings from a study to describe factors affecting district manager decision-making for MNH using realist evaluation methodology. Drawing on our previously elaborated middle-range theory as conceptual framework, we designed and administered a questionnaire comprising Likert scale and open-ended items on domains of decision-space, resource uncertainty, hierarchical authority, and organisational trust and respect to members of district health management teams in the Greater Accra Region of Ghana (n=70). Data were collected from December 2014 – February 2015. Likert scale items were analysed using composite scores and simple frequencies. Open-ended items were analysed against a start-code list from the conceptual framework. The majority of district managers (76%) perceived financial decision-space to be narrow, which shrinks local planning and management, and compromises managerial function. Hierarchical authority was viewed as legitimate and seldom resisted, though it was not perceived to compromise managerial function. These findings validate and further refine our earlier published results that systemic influencers – high resource uncertainty, lacking financial transparency and hierarchical authority – promote patterns of managerial decision-making attuned more towards servicing systemic bureaucracy, thus less responsive to emerging district-level challenges. While trust and respect of senior leaders appear to temper bureaucratic effects, these interactions prove more difficult to unpick. Organisational uncertainty also promotes an accountability of control, and calls into question expectations of mismatched managerial authority versus resource control. This article adds timely understanding to contextualised, systemic approaches to MNH policy implementation, and points to the need to rethink district financing, both in terms of its organisation and in absolute terms if primary healthcare delivery, of which MNH constitutes a major part, is to make its desired impact.

KEYWORDS
District management and leadership; realist approach; decision-space; governance; accountability

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Recent progress updates on maternal and newborn health (MNH) are mixed: advances have been made in women accessing MNH services globally, yet challenges remain in health system organisation. By *organisation* we mean how health system institutions, actors and processes (including authority, responsibility, accountability and information) are arranged (Shortell & Kaluzny, 1994). Health system organisation can effect implementation of MNH policies (Requejo et al., 2014). As debates shift from Millennium Development Goals (MDGs) to Sustainable Development Goals there remains an outstanding need to improve MNH service delivery. Increasingly, implementation effectiveness to meet MNH targets is being recognised (WHO, 2015b). MNH knowledge gaps have been shown to require: (1) greater attention to contextualised understandings of MNH intervention interactions within health systems; and (2) evaluating subnational managerial capacities (Kendall, 2015).

Health system organisation and its balance of top-down versus bottom-up policy implementation will also determine the existent bureaucratic accountability mechanisms. The ability to 'call one to account', and the willingness to be answerable to another, is based on authority and power between different actors (Mulgan, 2000). As part of bureaucratic accountability, managerial accountability – the 'answerability' of managers to higher-level authorities – is a feature of health systems, and is often focused on resource inputs and outputs (Newell & Bellour, 2002). Managerial accountability of health system performance is related to tensions between 'accountability for control' (i.e., compliance, standards and sanctions) versus 'accountability for improvement' (i.e., learning and feedback) (Brinkerhoff, 2004). Reviews have shown study of bureaucratic accountability to be particularly neglected in health systems literature (Cleary et al., 2013).

Context of maternal and newborn health service delivery in Ghana

Ghana faces persistent challenges in delivering quality MNH services. Maternal mortality is estimated at 380/100,000 (WHO et al., 2014), child mortality (1-5 years) at 19/1,000, and neonatal mortality at 29/1,000 (Ghana Ministry of Health, 2014b; Ghana Statistical Service et al., 2015). While these figures are comparatively low in West Africa, they represent a lack of progress. Increased access to MNH services through reduced financial barriers has increased skilled delivery coverage, yet institutional maternal mortality rates have not decreased (Dzakpasu et al., 2012). A growing body of evidence is adding understanding to the implementation challenges related to MNH interventions (Amoakoh-Coleman et al., 2015; Banchani & Tenkorang, 2014; Ganle et al., 2014; Kayode et al., 2014; Oduro-Mensah et al., 2013). The MDG Acceleration Framework and Country Action Plan (MAF) (Ghana Ministry of Health et al., 2011b), focuses on strategic interventions known to impact MNH: family planning, emergency obstetric and neonatal care, and skilled delivery. Importantly, the MAF also highlights issues of management and leadership strengthening as a strategic MNH priority:

> *"A number of governance issues exist, relating to limited responsiveness to emerging issues, weak transparency and accountability, lack of effective leadership, and decentralisation. Most maternal health activities are implemented at the district and*

sub-district levels, and usually there is a significant mismatch between the work to be done and the resources allocated".

Improving district-level governance for MNH implementation effectiveness is critical, and empirical evidence is lacking. Thus, the objective of this article is to describe factors affecting district manager decision-making for MNH.

MATERIALS AND METHODS

Conceptual framework

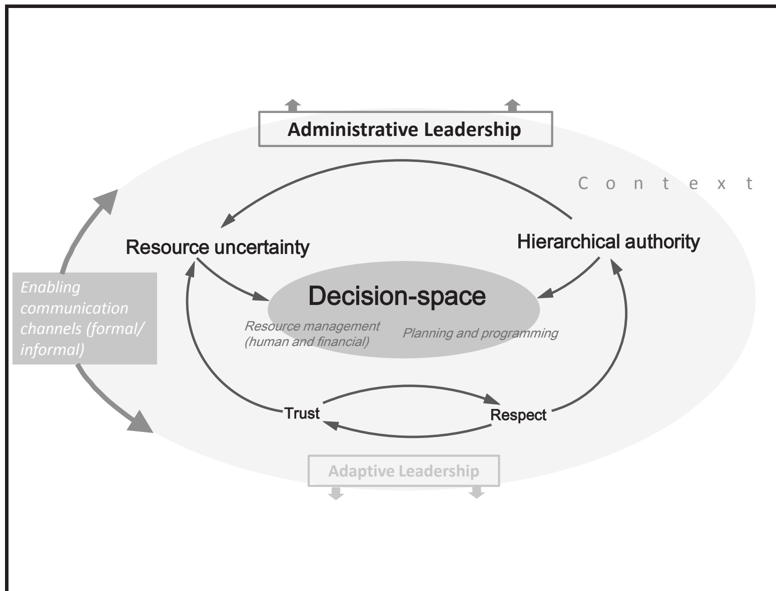
This study is part of an ongoing realist investigation (Kwamie et al., 2015a). In this article we seek to validate the generalisability of our earlier findings from a single district to all districts in the Greater Accra Region of Ghana. This is in keeping with the realist approach which seeks to build up validity of findings through processes of repeated theory development, hypothesising and refinement (Pawson & Tilley, 1997). Realist approaches study causal linkages between contexts, mechanisms and outcomes of a phenomenon. The investigation begins with a middle range theory (MRT) based on known evidence and experience, which is subsequently 'tested' for generalisability. The MRT is subject to refinement through this repeated testing. Through this 'cumulation' process, realist approaches seek to address methodological shortcomings of validity often laid against case study designs. We reviewed the literature related to our central research question of which factors influence district manager decision-making. We identified key concepts of power, trust and decision-space as relevant to explain district manager decision-making in the study context. We also drew on Complex Leadership Theory (Marion & Uhl-Bien, 2001; Osborn et al., 2002; Schneider & Somers, 2006; Uhl-Bien & Marion, 2009; Uhl-Bien et al., 2007) which posits that leadership 'types' emerge out of the balance of top-down versus bottom-up elements in a complex adaptive system. As a result, the type of leadership observed will be more greatly oriented towards serving the interests of the top (administrative leadership) versus the bottom (adaptive leadership). We developed an initial MRT:

> In a context of strong hierarchical authority and resource uncertainty, district manager decision-space in general is narrow-to-moderate, contracting for resource decisions and expanding for planning decisions. The outcome is a predominant district management and leadership pattern geared towards serving system bureaucracy (administrative leadership) and impeding the capacity for managerial responsiveness (adaptive leadership). Through regular formal and informal communication channels (phone, email, planning meetings and workshops) managerial networking is facilitated, and high levels of trust are fostered across the district and with regional management. District managers use trust as a coping mechanism to deal with resource uncertainty. High levels of trust at district-level in turn open up greater decision-space by lessening perceptions of decision risk. District managers link trust of regional management to respect for regional management's

position and decisions. This respect for authority has a reinforcing effect on the hierarchy of the system by legitimating it.

This became the conceptual framework for this study **(Figure 4.1)**.

Figure 4.1: Conceptual framework for the study



Study design
A questionnaire comprising Likert scale items and open-ended questions was used to interview district health management team (DHMT) members in the Greater Accra Region.

Instrument development
Variables (i.e. decision-space, resource uncertainty, hierarchical authority, trust and respect, defined below), were measured using a set of Likert scale items with five category response options ranging from 'strongly disagree', 'disagree', 'neither agree nor disagree', 'agree' and 'strongly agree'. Questions were generated through literature review and findings from our previous study, and were refined through pre-test with a cohort of district managers on study leave at the University of Ghana School of Public Health. These managers were not part of the respondent pool. Respondents were given the option after every item to explain the reasons behind their answers. These answers generated the qualitative data.

We defined *decision-space* as 'the range of choice local decision-makers have available to them' (Bossert, 1998; Bossert & Beauvais, 2002; Bossert & Mitchell, 2011). We developed variables and measured decision-space with 6 indicators on the extent of centralised versus decentralised control over key district-level decisions: those concerning financial

management, human resources management, local planning and programming, district management, financial resource allocations, and formal staff sanctioning. We conceived *hierarchical authority* as the degree of top-down power in policy implementation, and drew on the work of Verhoest and colleagues (2004), and Erasmus, Lehmann and Gilson to define it as 'coordination and/or control of other actors by higher-level authorities with policy goals in mind' (Erasmus & Gilson, 2008; Lehmann & Gilson, 2013). The 6 indicators we identified to measure hierarchical authority were: subjectivity to senior leader decisions (where senior leader was defined as regional-level management), belief in the legitimate authority of senior leaders, subjectivity to a sanction and reward system, resistance to senior leader authority, alignment in district and regional goals for district performance and being compromised in the role of district manager because of the degree of senior leader authority. We drew on our prior empirical findings to define *resource uncertainty* as 'the uncertainties of district planning and performance related to inadequate human and financial resources'. We measured resource uncertainty pertaining to the availability of financial and human resources with 6 indicators: financial resource availability, financial resource timeliness, human resources availability, human resources timeliness, time spent lobbying for resources, and being compromised in the role of district manager because of resource uncertainty. We adapted from the works of Lewicki and colleagues (1998), Kramer (1999), Gilson (2003, 2006) and Hitch (2012) to define *organisational trust* as the 'confident, positive expectations regarding another's conduct'. The 6 indicators we selected to measure organisational trust were: credibility of senior leaders, senior leaders keeping commitments, senior leaders behaving ethically in corporate practices, being treated fairly by senior leaders, feeling secure in expressing opinions and ideas to senior leaders and senior leaders creating environments where risks and mistakes are viewed as learning opportunities. Finally, we defined *organisational respect* as the 'esteem or deferential regard felt or shown; experience through organisational support and consideration'; this was adapted from the work of Ramajaran and Barsade (2006). The 6 indicators we used to measure organisational respect were senior leaders demonstrating commitment to their work, senior leaders being transparent in their communications, senior leaders asking about challenges in the district, senior leaders welcoming feedback and constructive criticism, senior leaders encouraging participatory ways of working and being inspired to achieve corporate goals because of senior leaders.

Study population

Each DHMT has a minimum core team comprising of district director of health, deputy director of nursing, disease control/nutrition officer, health information officer and accountant. All core DHMT members in all 14 districts (4 rural; 10 urban) of the Greater Accra Region were targeted. In total 70 questionnaires were administered.

Data collection

Written letters were sent to the regional directorate for permission to administer questionnaires at district level. Data were collected by the first author and trained research assistants from December 2014 – February 2015. Each domain definition was read out to

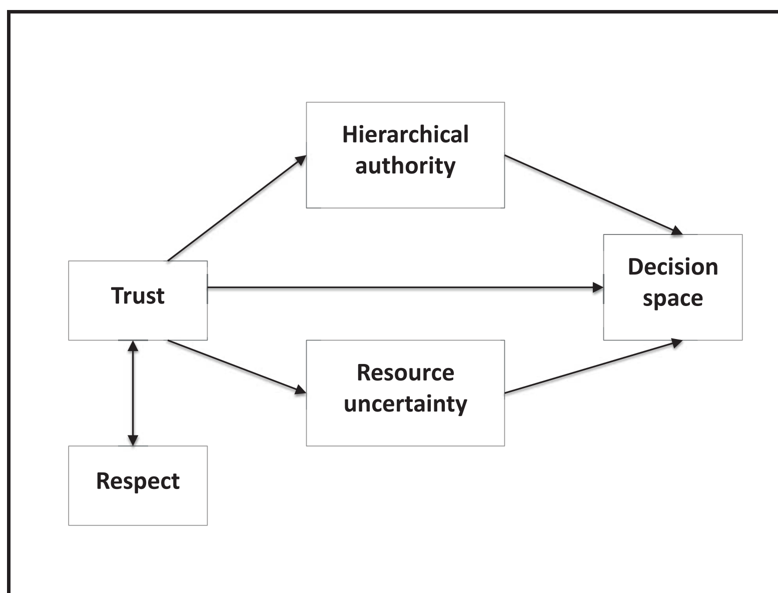
respondents for their understanding. Each domain item was then read to respondents as a statement for them to respond to with their opinion.

Data analysis

We analysed the effects of the relationships between factors using the following hypotheses **(Figure 4.2)**:

1. Hierarchical authority and resource uncertainty will be negatively associated with decision-space.
2. Trust and respect will down-modulate the relationships between hierarchical authority, resource uncertainty and decision-space, such that the influence of resource uncertainty is lessened where there are higher levels of trust and respect; paradoxically, the influence of hierarchical authority will be greater where there is higher trust and respect.

Figure 4.2: Analytical framework for the study



We treated the domain of decision-space as our dependent variable and the other four domains as independent variables. Questionnaire results were entered into Excel and then imported into Stata (Version 13.1, 2013). For quality assurance double data entry was done to minimise manual data errors.

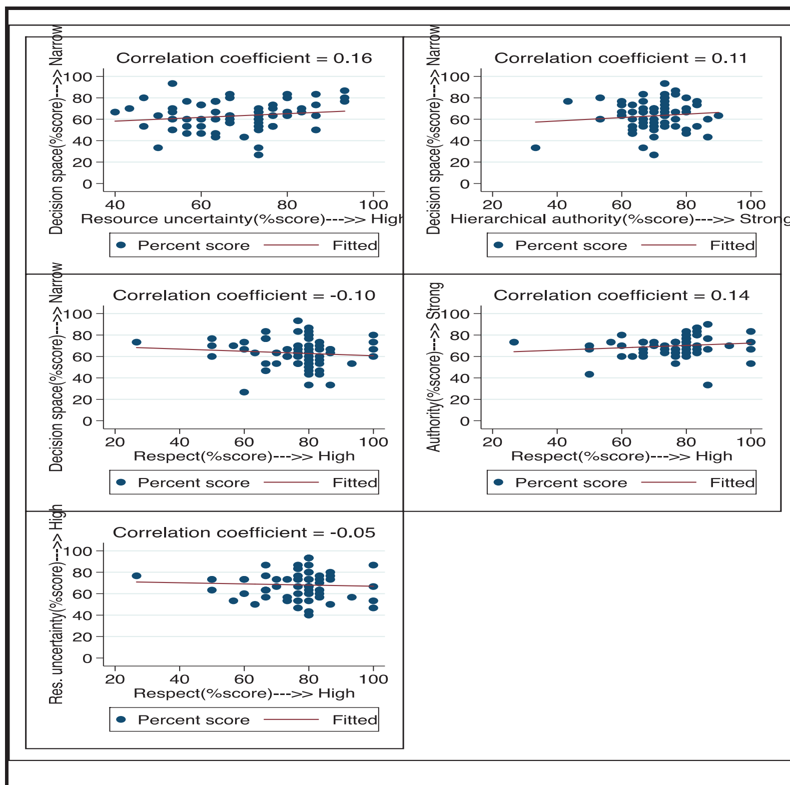
Likert scale items were scored from 1 to 5, with 1 corresponding to 'strongly disagree' and 5 corresponding to 'strongly agree' to generate a composite score for each domain. Composite Likert scores ranged from 6 to 30 (the minimum and maximum scores possible) **(Table 4.1)**.

Based on the initial analysis, we found respondent answers clustering around three response options only ('agree', 'disagree', 'neither agree nor disagree'), so we collapsed response options from five to three, by combining 'strongly disagree' and 'disagree', and 'strongly agree' and 'agree'. These collapsed responses became the basis for a simple frequencies analysis. Second, based on the qualitative data, we re-conceptualised the domains of organisational trust and organisational respect to *trust of leadership* and *respect for leadership*, a more accurate measurement of the relational interactions between district managers and their senior management rather than the entire organisation.

Table 4.1: Categories for composite Likert scores

Score	Domain				
	Decision-space	Hierarchical authority	Resource uncertainty	Trust in leadership	Respect for leadership
6-14	Wide	Weak	Low	Low	Low
15-22	Moderate	Moderate	Moderate	Moderate	Moderate
23-30	Narrow	Strong	High	High	High

Figure 4.3: Correlation plots of decision-space, resource uncertainty, hierarchical authority, and respect



Correlation plots were used to describe the relationship between decision-space, hierarchical authority, resource uncertainty, and organisational respect **(Figure 4.3)**.

Qualitative data linked by unique identifier to the quantitative data were entered into Excel. Data were cleaned and manually extracted using an analysis matrix. Data were coded against a start-code list based on the conceptual framework. Emerging themes were also coded.

Ethical considerations

This study was part of a larger project investigating health system approaches to accelerating attainment of MDGs 4 and 5 in the Greater Accra Region, Ghana (2011-2015). Ethical approval was awarded by our institution. Informed consent was obtained from each respondent. Questionnaires remained anonymous through the use of unique identifiers throughout analysis.

RESULTS

We summarise demographic data of respondents (n=70) **(Table 4.2)**, composite scores for each domain **(Table 4.3)**, and Likert scale responses by domain **(Table 4.4)**.

Table 4.2: Respondent demographic data

Variable	**Rural District**	**Urban District**	**Total**	**% of all respondents**
	(n=18)	**(n=52)**	**(n=70)**	
Mean age in years (SD = 9.82)	44.3	44.8	-	-
Mean years in post (SD = 4.21)	3.2	5.0	-	-
Mean years in GHS (SD = 10.65)	16.5	17.0	-	-
Sex				
Male	5	17	22	31.4%
Female	13	35	48	68.6%
Professional classification				
Medical doctor	1	6	7	10%
Physician Assistant	-	1	1	1.43%
Midwife	1	-	1	1.43%
Public Health Nurse	4	16	20	28.6%
Disease control officer	2	7	9	12.6%
Nutrition officer	2	7	9	12.6%
Health information officer	-	5	5	7.14%
Pharmacist	1	-	1	1.43%
Administrator	3	5	8	11.4%
Accountant	4	3	7	10%
Other	-	2*	2	2.86%

Table 4.3: Domain composite scores

Domain	Score	Std. Dev.	Level
Decision-space	18.94	3.92	Moderate
Hierarchical authority	20.97	2.79	Moderate
Resource uncertainty	20.51	3.64	Moderate
Trust in leadership	21.56	3.58	Moderate
Respect for leadership	22.93	3.65	Moderate

Table 4.4: Likert scale responses, by domain

Decision-space: *"the range of choice local decision-makers have available to them"*	**% Disagree**	**% Neither agree nor disagree**	**% Agree**
Most decisions concerning financial management of the district are made at national and regional levels	40%	13%	47%
Most decisions concerning human resources management of the district are made at national and regional levels.	19%	11%	70%
Most decisions concerning local planning and programming for the district are made at national and regional levels.	73%	7%	20%
Most decisions concerning management of the district are made at national and regional levels without consulting the districts.	66%	9%	26%
I have little discretion over allocation of financial resources to meet district performance.	16%	9%	76%
I have less influence over formal staff sanctioning than my senior leaders do.	31%	15%	53%
Hierarchical authority: *"coordination and/or control of other actors by higher-level authorities with policy goals in mind"*	**% Disagree**	**% Neither agree nor disagree**	**% Agree**
I am subject to the decisions of my senior leaders.	19%	29%	53%
I believe that the authority of my senior leaders is legitimate.	13%	9%	79%
I am subject to a sanction and reward system which is aligned with corporate values and goals.	3%	10%	87%
I seldom resist the authority of my senior leaders.	30%	6%	64%
My goals for district performance are the same as my senior leaders' goals.	16%	11%	73%
I am compromised in my role as a district manager because of the degree of authority of my senior leaders.	51%	14%	34%
Resource uncertainty: *"The uncertainties of district planning and performance related to inadequate human and financial resources"*	**% Disagree**	**% Neither agree nor disagree**	**% Agree**
I seldom have the financial resources I need to support my decisions regarding district performance.	16%	7%	77%
I seldom have the human resources I need to support my decisions regarding district performance.	39%	13%	48%

I spend much of my time lobbying for resources.	54%	9%	37%
The financial resources I budget for seldom arrive in a timely manner.	19%	4%	77%
The human resources I request seldom arrive in a timely manner.	27%	11%	61%
I am compromised in my role as a district manager because of resource uncertainties.	21%	7%	71%
Trust of leadership: ***"Confident, positive expectations regarding another's conduct"***	**% Disagree**	**% Neither agree nor disagree**	**% Agree**
My senior leaders are credible.	16%	9%	76%
My senior leaders keep their commitments.	20%	21%	59%
My senior leaders behave ethically in their corporate practices.	7%	10%	83%
I am treated fairly by my senior leaders.	16%	13%	71%
I feel secure in expressing my opinions and ideas to my senior leaders.	16%	13%	71%
My senior leaders create an environment where risks and mistakes are viewed as learning opportunities.	16%	27%	57%
Respect for leadership: ***"Esteem or deferential regard felt or shown; experienced through organisational support and consideration"***	**% Disagree**	**% Neither agree nor disagree**	**% Agree**
My senior leaders demonstrate commitment to their work.	0%	13%	87%
My senior leaders are transparent in their communications.	14%	17%	69%
My senior leaders ask me my opinions about challenges that arise in my district.	9%	9%	83%
My senior leaders welcome feedback and constructive criticisms.	10%	10%	80%
My senior leaders encourage a participatory way of working.	6%	7%	87%
I am inspired to achieve corporate goals because of my senior leaders.	11%	13%	76%

High resource uncertainty (correlation coefficient = 0.16) and strong hierarchical authority (correlation coefficient = 0.11) appear to narrow or diminish decision-space, whereas high respect (correlation coefficient = -0.10) appears to widen decision-space at district level. The majority of district managers (n=53; 76%) perceived decision-space for financial resource allocations to meet district performance to be narrow. The bulk of district managers also perceived decision-space for human resource management to be narrow (n=49; 70%), and limited sanctioning powers at district-level (n=37; 53%). The greater part of managers reported wider decision-space for local planning, programming and management (only n=14; 20% agreed that these decisions are made at national or regional levels). The majority of district managers believed in the legitimate authority of their senior leaders (n=55; 79%), and seldom resisted that authority (n=45; 64%). Most managers viewed themselves as subject to the decisions of their senior leaders (n=37; 53%). Most managers viewed themselves as in line with a system of sanction and reward aligned to organisational goals

and values (n=61; 87%), and perceived coherence between their own goals and senior management's vis-à-vis district performance (n=51; 73%). However, managers did not primarily see themselves as compromised in their roles because of hierarchical authority (only n=24; 34% reported that they were compromised). The majority of managers reported that they seldom had sufficient financial resources to support their decisions on district performance, and these were seldom on time (both n=34; 77%). Nearly half of managers agreed that they seldom had sufficient human resources and these requests were seldom timely met. Lobbying for resources was not a common practice (only n=26; 37% of managers reported spending much time lobbying for resources). Unlike hierarchical authority, most managers agreed that resources uncertainties compromised them in their managerial role (n=50; 71%). District managers reported viewing their senior leaders as credible (n=53; 76%), as behaving ethically in their corporate practices (n=58; 83%), and as being treated fairly by them and feeling secure to express opinions and ideas (both n=50; 71%). There was more variation in perceiving senior leaders in keeping their commitments (n=41; 59%) or creating environments where risks and mistakes are viewed as learning opportunities (n=40; 57%). Managers viewed their senior leaders as demonstrating commitment to their work and encouraging a participatory way of working (n=61; both 87%), as enquiring after challenges that arise in the district (n=58; 83%) and welcoming feedback and constructive criticism (n=56; 80%). To a lesser but still predominant degree, managers agreed that their senior leaders inspire them to achieve corporate goals (n=53; 76%) and senior leaders are transparent in their communications (n=48; 69%).

Expansion and contraction of decision-space

District managers indicated that the bulk of funds currently reaching the district are for vertical programmes, pre-earmarked at national-level. Programme funds come with their specified budgets which narrows decision-space. In contrast, Government of Ghana (GOG) funds come unmarked and are therefore more flexible. These funds have eroded over time, thereby contributing to narrowed decision-space. This affects the capacity to carry out district-level activities, plans and programmes. When compounded with the fact that district health directorates do not themselves generate funds (as compared to health facilities that generate through service provision), this further limits DHMT decisions:

> *"We don't generate [internally-generated funds], we wait on the central government and it either comes or not so it's difficult to get the money to perform your duties." (#26)*

Another manager noted:

> *"GOG funds don't come at all, so where is the discretion you have? When it was coming we had discretion. Programme funds come earmarked and other activities are run on the back of programme funds" (#8)*

Managers indicated they had wider autonomy for local management, planning and programming (i.e., the day-to-day management of the district and running of programmes), guided by the objectives set at national and regional levels.

One consequence of the erosion of GOG and the dependence on programme funds is that while districts present budgets annually to the region as part of their annual planning, the lateness of programme funds and lacking allocation transparency usually causes managers to frequently 'pre-finance' activities, borrowing from other funds to run activities, and being reimbursed when funds from the region finally arrive:

> *"We don't have any idea about what we are allocated. Under normal circumstances we should put in a budget and then it comes here and we have to work around it" (#10)*

With human resource management, once staff have been allocated to regional-level they are then posted to districts. District managers report that they have discretion to post staff to sub-district facilities once they reach the district. Managers differed in their perceptions of their sanctioning powers: some believed they had sufficient sanctioning powers while others reported that it depended on the staff infraction. Because staff salaries are not part of district allocations, managers do not have the ability to hire and fire full-time staff. This was seen by managers as contributing to difficulties in disciplining staff:

> *"We have the health extension workers, but they will just not do the work as we want them to do it. Because when you report them and it's gone up to their coordinators, nothing is done. So there is no force. So they don't care. They can sit in the house for weeks and then come. When we report nothing is done. So it pulls the work backwards when it happens that way". (#45)*

Decision-space influenced by resource uncertainties
Managers felt they had their hands tied by limited funding. The prevailing perception was that while managers plan at local level, they did not have ownership over the policies which they implement:

> *"Even if you have ideas, you know funds won't come. For example, when I first came, I was writing proposals and such. In the end you give up because nothing comes. Our local plans we cannot carry out. [National-level]'s plans, like [National Immunisation Days], we have to carry out" (#13)*

District managers were clear that resource (especially financial) uncertainty made it difficult to perform managerial duties. The perception of resource uncertainty was more acute in new districts. They noted this compounded challenges in priority-setting:

> *"It's not that we cannot prioritise or don't know what to do. We are really challenged with funds. We can barely scrimp the top. Every unit needs something. Which priority do you prioritise?" (#57)*

District managers commented that while they had learned to operate in such a context, resource uncertainty did not promote much innovation or creative thinking:

> *"You don't have funds for what you really want to do. You are supposed to be innovative, but you can't achieve what you would want" (#15)*

Compared to financial resources, uncertainties surrounding human resources were better understood. Managers were cognisant of the systemic trickle-down effects of national-level supply – the region itself can only share what it receives. Managers also noted the need to balance staff requests against availability of graduates from the training institutions:

> *"The supply of human resources goes together with the academic calendar year, so you have to know as and when they are made available at region. It's not like there is a bank of graduates waiting" (#38)*

Compared to hierarchical authority, managers perceived that resource uncertainties compromised them in their managerial role.

Contexts of strong hierarchy

Whether managers perceived themselves as subject to regional-level decisions depended on whether or not those decisions were organisationally-aligned and ethical. Managers indicated the existence of hierarchy, freely using language like 'superior' and 'subordinate'. Resistance to authority was not viewed favourably:

> *"Sometimes we object, but are passive with our objections – it wouldn't go far. How far can your noise go?" (#3)*

Ultimately, while hierarchical authority constitutes part of the organisational context, it was not perceived by managers as compromising their decision-space.

Strong communication channels promote trust and respect towards senior management

Managers largely demonstrated high degrees of trust and respect towards regional management. Managers believed that they operated on the basis of trust with their senior leaders, and this was an enabler to follow policy directives under challenging conditions:

> *"If I didn't trust I wouldn't be able to implement" (#64)*

Managers commented on regular communication channels, in particular monthly regional health management team meetings which presented opportunities for information seeking and sharing, consultation across districts, and reporting to regional management – this was seen to build trust and maintain conducive relationships. Despite strong hierarchy there was a genuine sense of trust and respect for regional management in their decision-making:

> *"Because we are all managers, we reason on the same line, so we are all getting on well. In fact, I don't know, maybe because we used to meet at workshops, they used to organise a lot of workshops. Maybe because of that cordiality we meet often and we think we are one peoples sharing the same view" (#29)*

District managers perceived that because regional management possessed the requisite analytical and managerial skills to have ascended into those posts, they were sufficiently qualified in their decision-making, and could be trusted to make appropriate decisions. Regional management were described repeatedly as "reliable", "competent", and

“knowledgeable”. District managers recognised that the regional level was also subject to dependencies on national-level resources, resulting at times in unfulfilled promises:

> *“There may be problems but [regional management] are credible. They try, and if they didn’t try things would be worse” (#55)*

DISCUSSION

Our findings validate our preceding qualitative work, and add further depth to our understanding of systemic influencers of district manager decision-making. Limits on local planning decision-space are heavily influenced by the existing imbalance in district financing. Issues of district financing in Ghana have been delineated in the literature previously (Atun et al., 2011; Bonenberger et al., 2015; Wood-Pallas et al., 2015), especially related to the introduction of the National Health Insurance Scheme (NHIS) (Agyepong et al., 2014; Sakyi et al., 2012; Sodzi-Tettey et al., 2012). Witter and Adjei (2007) have previously shown the district-level challenges of inadequate funding on MNH service delivery. Hierarchical authority appears to have a lesser effect on district manager decision-space; this may be related to the tempering effect of positive leadership relations.

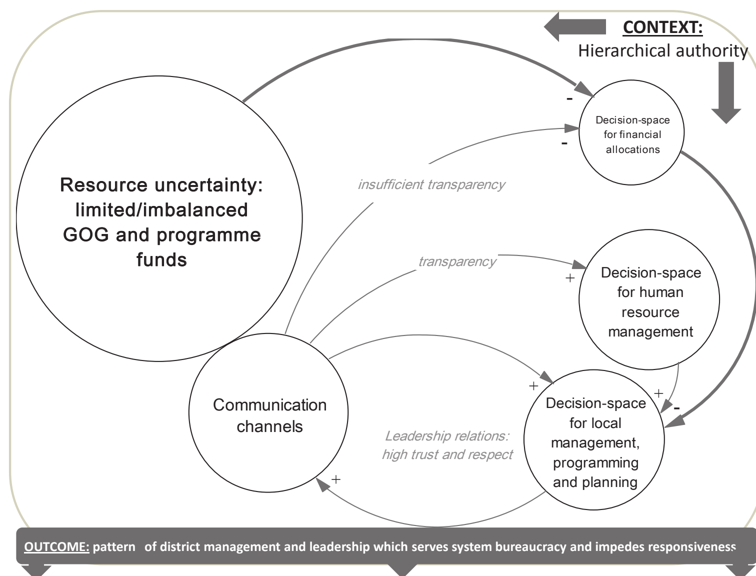
Based on our findings, we revise our MRT thus (see figure 4.3):

> District manager decision-space for financial resource allocation decisions, as a result of the limited amounts of Government of Ghana (GOG) funds and the current imbalance between GOG funds and donor-supported vertical programming, is narrow. This affects decision-space for local planning, programming and management, which is otherwise sufficiently wide in itself. Human resource decision-space is narrow-to-moderate. Greater transparency surrounding human resource decision-space widens it. High trust and respect for senior leadership is fostered through communication channels, and tempers any decision-space-narrowing effects of hierarchical authority. Hierarchical authority exists as context and is accepted, yet does not compromise district manager decision-space in the same way resource uncertainty does. The outcome is a predominant pattern of district management and leadership geared towards serving system bureaucracy (i.e., administrative leadership), which impedes the capacity for managerial responsiveness at district-level.

Seemingly, the Ghana Health Service relies strongly on bureaucratic controls and alignment in the execution of its mandate. Olivier de Sardan (2013) describes the existence of authoritarian bureaucracies, even in democratic political regimes; these bureaucratic modes of governance, explicitly top-down and implicitly condescending, are legacies of colonial administrations. For example, in India heavily formalised top-down reporting structures have been shown to neutralise true accountability (George, 2009). Aitken (1994) also found from the study of district health managers in Nepal how systemic values underpin constraints on managerial decision-making, rendering ‘official’ values divergent from actual values at district level. More recent examples from Ghana also confirm the strong upward accountability enforced by centralised planning mechanisms, and the near-absence of functional social accountability (Van Belle & Mayhew, 2014). From our data, resource

uncertainty appears to influence district manager decision-space more greatly than does hierarchical authority. However it is hierarchical authority which maintains control over resources, and promotes uncertainty at district level. Globally, expectations are high for district managers to 'do more with less'. This assumption bears questioning. Mismatches between what district managers are expected to do and what they can deliver given their operational contexts is a persistent challenge (Collins & Green, 1994). The organisational uncertainty promoted by a lack of availability and possession of resources at the district-level creates dependencies on higher levels of the health system which further generates implications for managerial accountability; uncertainty shifts accountability towards an accountability of control and away from an accountability of improvement. This raises a fundamental question: can managers really be held to account for district performance if resource control is out of their power?

Figure 4.4: Revised conceptual framework of the study



The global MNH agenda itself promotes an accountability of control, focused on checks and balances on the financial resources which emanate at supra-national level. We observe this in its preoccupation with "*tracking and reporting on allocation, disbursement and utilisation of financial resources using the tools of auditing, budgeting and accounting*" (Brinkerhoff, 2004). For example, the 2011 report from the Partnership for Maternal, Newborn and Child Health (PMNCH) defines accountability as "*identifying the commitments and duties of stakeholders and making stakeholders answerable for their performance*" based on monitoring, reviewing and action (The Partnership for Maternal Newborn & Child Health, 2011). While such an orientation is intended to link financial inputs to performance outputs, its focus on procedural compliance conflicts with accountability mechanisms focused on improvements and learning. The 2014 PMNCH report further highlights the increase in financial commitments for MNH, which have now reached USD 45 billion (The Partnership for Maternal Newborn & Child Health, 2014). Despite these vast sums of international financing

for MNH, 'results-driven' accountability has not clearly impacted MNH outcomes. In fact, systematic review evidence has proven inconclusive on whether or not aid-funded MNH interventions are associated with improved MNH outcomes (Hayman et al., 2011). Increases in financial resources have occurred amidst shifts in donor funding for MNH over the past decade. Hsu and colleagues (2012) demonstrate the increased proportion of MNH funding from global initiatives (i.e. The Global Fund for TB, HIV and Malaria, and the GAVI Alliance): in 2003 global initiatives accounted for less than 8% of MNH development assistance; by 2010 they accounted for 22%. Hsu and colleagues further demonstrate that MNH funds towards general budget support, sector budget support and general health systems strengthening have reduced over the period 2008-2010, while slight increases to MNH-specific project-based funding have been observed (Hsu et al., 2012). This confirms our analysis elsewhere (Kwamie et al., 2015b), and may account for the increased verticalisation of programme funds and contracting decision-space expressed by managers in this study. Despite massive inflows of donor resources, the funding model supports the climate of restricted district manager decision-making and does not enable the local-level innovation necessary for greater impact. This raises the paradox that greater financing in vertically-programmed funds are expected to improve service delivery, but do not necessarily effect service delivery organisation.

Our methodology raises the multiple challenges of studying the complexities in district organisation. First, we note some difficulties in moving from abstraction to specification, that is from analytical generalisability (i.e., that our findings are theoretically sound and may be transferable to other settings) towards statistical generalisability. Second, we note the difficulties in trying to measure 'hardware' and 'software' interactions in complex health systems. Attempting to measure managerial perceptions of decision-space, hierarchical authority, resource uncertainty, and trust and respect for leadership proved challenging, mainly because these remain subjective measures. Resource uncertainty (and the decision-space around it) can be considered to be hardware since it deals with health system 'building blocks' (e.g., financial and human resource inputs which are visible as health system actions). On the other hand, hierarchical authority and trust and respect for leadership are software: the ideas and interests, relationships and power, and values and norms which are intangible and interact with health system hardware to promote or retard policy decisions (Sheikh et al., 2011). The composite Likert scores revealed moderate levels across all domains, masking the complexity of their constituents, which still required further qualitative explanation. It could be that our instruments were not sensitive enough, however such an analysis underscores the fact that measuring the interactions themselves is hard to do. Further qualitative work into the nature and cultural specificity of hierarchy would be useful in this regard. By being theory-driven, our analysis sought to build greater causal explanation of district manager decision-making against the commonly held explanations of district non-performance due to 'weak management' and 'lacking leadership'. In realist language, we were seeking to further explain the pre-existing contexts of managerial decision-making, the "social rules, values and norms and interrelationships gathered in these places which set limits on the efficacy of programme mechanisms" (Pawson & Tilley, 1997) to understand the previous sustainability failure of a management and leadership capacity strengthening intervention (Kwamie et al., 2014).

Regarding our initial hypotheses for this study, while we have demonstrated that there are relationships between hierarchical authority, resource uncertainty and decision-space, it is not clear that we have been able to quantify those relationships (or indeed that they can be). Furthermore, whereas we hypothesised that trust and respect would be moderators of hierarchical authority and resource uncertainty, our findings have not demonstrated this, only that trust and respect are present. While we had initially proposed trust to be a coping strategy to counter uncertainty (a familiar concept in the literature), in this case we have not been able to sufficiently unpick these interactions, and it may very well be that trust arises out of leadership interactions instead. Trust and respect appear to help improve the environment for decision-making; in another context it may have been expected to allot blame and frustration towards regional management, however that is not the case here. While communication channels do seem to support the exchange of goodwill, there is also a dynamic of high social capital which is linked to hierarchy, and supports trust and respect. The risk is that the entrenchment of financial resource uncertainty will cause apathy and withdrawal to set in in district managers, thus eroding their goodwill. A final conceptual challenge was differentiating between organisational trust and respect. While the literature distinguishes between the two, we note the difficulty in separating the two concepts in practice.

Our study also has some limitations. We note our small sample size which may have affected our ability to observe significant associations between our variables. We also note from our data collection that some respondents were reluctant to respond strongly (either agreeing or disagreeing). This can be explained by the process of permission letters being issued from the region to conduct the study, which is necessary protocol, yet reinforces the top-down nature of the system itself. Some respondents held the perception that findings would be fed back to regional management, even though respondents were assured of their anonymity. This further reflects the ongoing tensions of organisational controls.

CONCLUSIONS

Our findings show the systemic influencers of district-level decision-making, and point to the deep-seated need to rethink the organisation of district financing to support managerial decision-making autonomy. This is important to increase managerial responsiveness and implementation effectiveness of MNH interventions.

CHAPTER 5.

The path dependence of district manager decision-space in Ghana

"In the early 1980s people were designated as district medical officers responsible for multiple districts. The district health system did not exist, it was only the hospital, and the officer there was the manager of as many districts that fell within his catchment. He goes on outreach from time to time. He was a single doctor without a well-defined district with a specific population, based on how many other doctors were around you". (A former medical district officer)

ABSTRACT

The district health system in Ghana today is characterised by high resource-uncertainty and narrow decision-space. This paper builds a theory-driven historical case study to describe the influence of path-dependent administrative, fiscal and political decentralisation processes on development of the district health system and district manager decision-space. Methods included a non-exhaustive literature review of democratic governance in Ghana, and key informant interviews with high-level health system officials integral to the development of the district health system. Through our analysis we identified four periods of district health system progression: (1) development of the district health system (1970-1985); (2) Strengthening District Health Systems Initiative (1986-1993); (3) health sector reform planning and creation of the Ghana Health Service (1994-1996); and (4) health sector reforms implementation (1997-2007). It was observed that district manager decision-space steadily widened during periods (1) and (2), due to increases in managerial profile, and concerted efforts at managerial capacity strengthening. Periods (3) and (4) saw initial augmentation of district health system financing, further widening managerial decision-space. However the latter half of period 4 witnessed district manager decision-space contraction. Formalisation of Ghana Health Service structures influenced by self-reinforcing tendencies towards centralised decision-making, national and donor shifts in health sector financing, and changes in key policy actors all worked to the detriment of the district health system, reversing early gains from bottom-up development of the district health system. Policy feedback mechanisms have been influenced by historical and contemporary sequencing of local government and health sector decentralisation. An initial act of administrative decentralisation, followed by incomplete political and fiscal decentralisation has ensured that the balance of power has remained at national level, with strong vertical accountabilities and dependence of the district on national-level. This study demonstrates that the rhetoric of decentralisation does not always mirror actual implementation, nor always result in empowered local actors.

KEYWORDS
Decentralisation; decision-space; path dependence; district health system; Ghana; complexity

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INTRODUCTION

Decentralisation – that is, the shifting of decision-making power from national to subnational levels – has been a common feature in many countries. In sub-Saharan Africa, decentralisation processes have been viewed as major structural reforms to support district health systems, however the pervasiveness of decentralisation processes across countries has left little room to question the underlying assumptions of whether in fact they result in increased power for subnational actors, or actually improve health service delivery in terms of efficiency and equity. The complexity of decentralisation processes – the drivers, types, and sequences which underpin them – further compound the limited or conflictual empirical evidence on 'what works' in decentralisation (Litvack et al., 1998). Country experiences from Kenya, Uganda and Zambia have demonstrated inconclusive effects of decentralisation, with no clear influence on health service outcomes (Awio & Northcott, 2001; Jeppsson & Okuonzi, 2000). It has further been argued that a focus on outcomes, rather than processes of decentralisation, has impaired the decentralisation promise (Oyaya & Rifkin, 2002).

Decentralisation has largely been categorised into three types: political decentralisation (devolution) shifts political decision-making to local government authorities for greater representation closer to the populace; administrative decentralisation (deconcentration) transfers administration responsibilities, in accordance with national-level directives, for service delivery at lower agency levels; and fiscal decentralisation augments financial autonomy and decision-making of local authorities (Falleti, 2005). Yet despite the interactions between overall democratic governance processes and health sector developments in a country, systematic explorations of these influences has been limited. Mills et al (1990) note: "*…the public administration literature makes only passing reference to health, and the literature on the organisation of health services largely neglects its relationship to broader patterns of government structure of health services as if it were not greatly constrained by its national organisational context*". (p. 11)

An interest in functional district health systems is re-emerging after an extended period of less-than-desired health outcomes (Meessen & Malanda, 2014). Notions that "*district health systems cannot fully develop without commitment and support from the national level, or without some degree of autonomy and authority for planning services, for allocating resources and for managing [human resources]*", and that "*the most important policy directive concerns the decentralisation of the national health system in such a way that functional district health systems can result*" were cited nearly 25 years ago (WHO, 1988) (p. 3). Yet, it is not clear that progress in this regard has advanced. The concept of decision-space is the 'range of choice' local decision-makers have available to them in a decentralised context (Bossert, 1998; Bossert & Beauvais, 2002; Bossert & Mitchell, 2011). It is particularly important because it is indicative of the scope of local decision-making autonomy that exists within institutional processes. Studies from Ghana show district health manager decision-space to be constrained (A. Asante et al., 2006a; Bossert & Beauvais, 2002; Kwamie et al., 2015a; Kwamie et al., 2014; Larbi, 1998; Mayhew, 2003; Sakyi, 2008; Sakyi et al., 2011), and issues of governance and managerial non-responsiveness related to decentralisation negatively impacting maternal

health service delivery (Ghana Ministry of Health et al., 2011b). However, anecdotal evidence from health sector actors indicates this to have not always been the case.

Though decentralisation analyses were common in the early 2000s, few papers at the time, and since, have sought to explain the interplay between political, administrative and fiscal decentralisation, and its effects on the configuration of district health manager decision-space. This paper seeks to establish an explanatory theory of the sequencing of decentralisation processes in Ghana, and its implications on the development of the district health system and district manager decision-space over time.

Current decentralisation context and district manager decision-space in Ghana

Since 1992, Ghana has been a multi-party democracy. Located in West Africa, Ghana is a nation of 25 million people, organised into 10 regions, and consisting of 216 districts. The district health system is guided by two main pieces of legislation: the Local Government Act 462 (1993) outlines the creation of districts, and establishment and function of district assemblies as the highest political decision-making bodies within districts; the Ghana Health Service and Teaching Hospitals Act 525 (1996) outlines the delegation, from the Ministry of Health (MOH), objectives and functions of establishing a Ghana Health Service (GHS) at national, regional and district levels. What has emerged over time is a mixed-model of quasi devolution-cum-deconcentration, which has fostered incoherent, uncoordinated, and at-times contradictory decentralisation reform efforts (Ahwoi, 2010; Ghana Ministry of Local Government and Rural Development, 2003, 2010; Joint Government of Ghana & Development Partners, 2007). Critically, Act 462 is virtually silent on health functions, while Act 525 indicates dual lines of reporting and financing between the district assembly system and the hierarchy of the GHS organisation. In practice, tensions between Acts 462 and 525 have resulted in blurred vertical and horizontal accountabilities with dominant vertical relationships, while relationships between the district health management team (DHMT) and District Assembly remain ad-hoc and personality-dependent (Agyepong, 1999; Couttolenc, 2012).

METHODS

We developed a theory-driven historical case study to understand the historical processes and critical junctures which have led to the current constraints of decision-space for district managers in Ghana. We began with an established theory of decentralisation (outlined below), and based on our emerging data, built an explanatory theory of the development of the current context of district manager decision-space.

Analytical framework – path dependence and sequential decentralisation

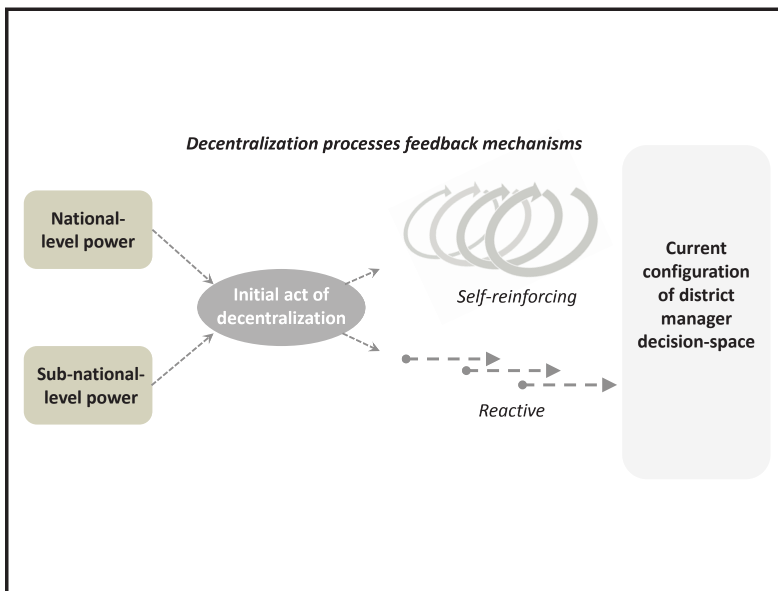
Path dependence, as a way of explaining (Kay, 2005), is defined as the historical sequences and patterns which are deterministic in nature to events which occur later in the path (Mahoney, 2000). Path-dependent sequences can contain two types of feedback mechanism: reactive mechanisms are 'action/counter-action' events, with each proceeding linearly after

the other; self-reinforcing mechanisms reproduce institutional patterns over time with increasing returns, thus making divergence from the path difficult once initiated. Path-dependent sequences are further characterised by inertia, meaning that events which occur earlier in the sequence have greater influence on the path than those which occur later.

Falleti's theory of sequential decentralisation (2005) draws on path dependence theory to understand the sequencing of decentralisation processes in Latin America. She posits that the timing, sequencing and conditions of the initial acts of political, administrative, and fiscal decentralisation interact to determine the actual shift of power from national to subnational actors. The governmental level whose interests succeed at the beginning of decentralisation will direct the type of initial decentralisation which occurs, and the initial act of decentralisation will give rise to path-dependent policy feedback mechanisms. Early political decentralisation tends to empower subnational levels, while early administrative decentralisation tends to empower national levels and ensure vertical accountability (Ribot, 2002). Insufficient fiscal decentralisation to accompany shifts in decision-making authority results in empowered national levels, on which subnational levels become further dependent.

To investigate the current configuration of district health manager decision-space in Ghana, and without *a priori* knowledge of the type of feedback mechanisms active in the sequencing of decentralisation processes, we employed Falleti's theory. Our analytical framework, representing the possible pathways and feedback mechanisms determined by the initial act and subsequent sequencing of decentralisation processes (i.e.., reactive or self-reinforcing) is illustrated in **Figure 5.1**.

Figure 5.1: Analytical framework of the study



Data collection and analysis

We collected data from multiple sources to build an understanding of key episodes in broad political, and more discrete health system developments. While the literature on democratic governance in Ghana is substantial, published evidence on Ghana's health system development is more limited. We began with a non-exhaustive review of the democratic governance literature in Ghana. We searched the following databases and bibliographies: Google Scholar, Scopus, International Bibliography of the Social Sciences, SocIndex, EconLit, CAB-Abstracts, African Journals Online, PubMed, and Web of Science. Search terms included the following: "decentralisation", "devolution", "deconcentration", "strengthening district health systems", "district development", "local governance", "health sector reform", "sector-wide approach" AND "Ghana" OR "Africa". We also retrieved articles from the reference list of published papers. Grey literature searches involved searching international organisation websites, and retrieving Government of Ghana, Ministry of Health, and Ghana Health Service documents: legislative documents (constitutions and Acts of Parliament), and policy documents (decentralisation, and health). We also searched archival print news media surrounding the passing of Act 525 for the years 1995-1997. All publications were in English; there was no date limit placed on any of the searches.

We further conducted key informant interviews with high-level officials from the MOH and GHS who were instrumental to the development of the district health system in Ghana. Eleven informants were identified. Nine were interviewed; two declined due to other commitments. Interview guides were developed to elicit information on: (1) changing decentralisation contexts and their influence on the health system; (2) key initiatives which supported district health system development; (3) periods of increased and decreased district managerial capacity and decision-making; and (4) the evolution of the Ghana Health Service. Two or more interviews were conducted by the first author with each informant. Interviews continued until thematic saturation was reached (Guest et al., 2006). Interviews took place from September 2013 to August 2014, at private venues of the informants' choosing; communication with one informant took place via telephone. Interviews were conducted in English and audio-recorded where permission was granted from informants. Hand-written notes were recorded in shorthand and converted into transcripts following each interview. To ensure rigour and quality of the data, summarised notes were shared with informants for accuracy. Transcripts were coded inductively.

Ethics

This study was part of a larger study to identify effective ways of improving maternal and newborn health service delivery in Ghana, for which ethical approval was obtained by the authors' institute. Informed consent was sought from informants. Anonymity of respondents was upheld throughout the analysis.

RESULTS

Overview of decentralisation sequencing in Ghana, 1859-present

We summarise key episodes in Ghanaian decentralisation in **Table 5.1**.

Table 5.1: Key decentralisation episodes in Ghana, 1859-present

Timeline	
Political period	**Decentralisation processes**
Colonial/Pre-independence 1859-1950s	Native Jurisdiction Ordinance (1878): original administrative decentralisation Weakened local government subject to centralisation characterised by colonial state
Independence 1957	Ghana gains independence from Britain
First Republic 1960-1966	Local Government Act 54 (1961): builds on previous ordinances to establish towns and municipalities; maintained distinction between local and central government structures; dual hierarchical structures operated in parallel with central government structures better resourced
National Liberation Council (Military rule) 1966-1969	Government-commissioned report points to excessive centralisation; recommends move to devolution, which does not occur
Second Republic 1969-1972	Local Administrative Act 359 (1971): administrative decentralisation aimed at abolishing distinction between local and central government structures
National Redemption Council (Military rule) 1972-1979	Act 359 only implemented in 1974 because of change in government; changes never take hold, hampered by lack of cooperation amongst departments; single hierarchy model to strengthen central government control at local level
Third Republic 1979-1981	New Constitution (1979): calls for a Health Service
Provisional National Defence Council (Military rule) 1981-1992	Administrative decentralisation reforms (1982) Structural Adjustment Programme begins (1983) Local Government Law 207 (1988): creates 110 districts across country with non-partisan district assembly elections Transition to multi-party democracy – New Constitution (1992): validates 1988 reforms and three-tier subnational government (area councils, districts, regions)
Fourth Republic 1994-present	Act 455 (1993): establishes formula-based financial allocations to district assemblies through District Assembly Common Fund Act 462 (1994): Local Government Act, based on PNDC Law 207 Act 525 (1996): establishes Ghana Health Service Act 650 (2003): establishes National Health Insurance

Because of the importance of 'origins' in path dependence theorising, whereas most of the democratic governance literature considers the trajectory of decentralisation processes since the First Republic, our analysis considers the initial act of decentralisation to be indirect rule under the British colonial administrators. Briefly, prior to 1859, local councils were elected bodies of chiefs. In 1878, the Native Jurisdiction Ordinance invested British-appointed local representatives with greater powers in order to capitalise patronage and loyalty towards the colonial administration (Hoffman & Metzroth, 2010). This early act of administrative decentralisation consequently reversed downward accountability of councils from their communities towards the colonial authorities instead (Crawford, 2009).

Independence in 1957 was followed by a twenty-year period of political instability and successive military coups, often resulting in the forfeiture of policy enactments. During this time the co-existence of parallel administrative structures – better-resourced central government authorities functioning alongside smaller, weaker local authorities – thrived. Local Government Act 54 (1961) expanded local government's limited powers, while maintaining the distinction between local and central government bodies. Subsequently, Local Administration Act (1971), enacted by Local Government Amendment Act 359 (1974), sought to rectify yawning gaps in capacities between local and central government by creating a single hierarchy model, thus encouraging further centralisation (Opare et al., 2012).

The Provisional National Defence Council (PNDC) military government came to power in 1981 on a revolutionary platform to defuse the concentration of national-level power. The eleven-point decentralisation plan presented by the PNDC government in 1982 signified the first attempts at political decentralisation (Awortwi, 2010). This coincided with the country's structural adjustment period, the continent's first, longest and most ambitious (Bratton et al., 2001). In 1988, PNDC Law 207 created the non-partisan district assembly system with 110 districts and elections every four years, becoming the basis for the Constitution of the Fourth Republic (1992), and ushering in a period of multi-party democracy. However, several structural elements compromised the degree of lower level participation and encouraged a custom of centralised decision-making. While the rhetoric of political decentralisation centred on local participation, empowerment, social accountability, and equilibrating rural-urban divides, its actual implementation employed decentralisation as an instrument to legitimise the military regime and inject the interests of central government into the local level (Ayee, 1997, 2008; Mohan, 1996). Evidence for such assertions appear in the exclusion of traditional chief membership from district assemblies, presidential appointments of one-third of district assembly members, including the District Chief Executive, exclusion of local government from the multi-party election processes (thereby superimposing partisan central governments onto non-partisan local government, and extracting more highly-qualified individuals to contest national parliamentary elections than stay at local level), and the exponential creation of districts (Ayee, 2007, 2012; Fiankor & Akussah, 2012; Nyendu, 2012). There is no evidence that the proportion of women appointees to the district assemblies exceeds the constitutionally-mandated 30% (Ofei-Aboagye, 2000). The result has been district assemblies with greater accountabilities vertically towards central government rather

than towards their local constituencies. Thus, decentralisation is legislatively political, but administrative in practice.

The District Assembly Common Fund (DACF) Act 455 (1994) legislated 5% of national revenues for districts, thus initiating fiscal decentralisation. To date, the DACF forms approximately 80% of district revenue. However, in fiscal terms, only 25% of the DACF is under the complete discretion of District Assemblies, the bulk being programmed centrally against National Development Planning Commission and Ministry of Local Government and Rural Development (MOLGRD) guidelines. As such, most departments and agencies as part of the District Assembly maintain administrative and fiscal relationships with their parent ministries. While intended to be politically neutral, DACF allocation formulas have been shown to vary in favour of districts with greater number of undecided voters during elections years (Banful, 2011).

In Ghana, such developments have been referred to as the *'politics of (de)centralisation'*, the appearance of decentralisation masking the legal, political and administrative structures which continue to serve central government interests over local democratisation and empowerment (Ayee, 1997; Crawford, 2009). Thus while the sequencing of decentralisation processes in Ghana has followed an order of administrative-political-fiscal decentralisation, a centralising tendency towards governance has persisted.

Decentralisation in the health sector

Period one: developing the district health system, 1970-1985

Within these shifting political contexts, significant district health system developments were occurring simultaneously. By 1970 the MOH was divided into two wings (technical and policy), and reform efforts were underway between 1970 and 1972 to create a separate Department of Health to be responsible for organising service delivery. The 1972 military coup interrupted interest in the reorganisation of the MOH:

> *"You see, when a new government comes in like a military government which had no idea about running a [health] service, they depended on the guidance of the technocrats. But usually they don't ask you what are the important things you are working on now. Usually when they come in they want to see hospitals, the clinical things which are glamorous as healthcare. So the creation of the Ministry of Health was put on the back burner". (Key Informant 1)*

This suspension resulted in an inability to address service delivery challenges at local level. Without effective direction from national-level, a more coherent approach to district management was needed. The 1970s Primary Health Care (PHC) movement in Ghana was favourable to international thinking on *Health for All*, and therefore was of international interest as a country which could deliver a working model. Strategy papers written in-country supported the move towards developing the district health system (Dovlo, 1998).

Much of the impetus for district-level development was driven by the introduction of a first trained cohort of master's level public health district medical officers (DMOs) to lead teams of health professionals in charge of the district (DHMT). This represented a shift in DMO function from the hospital-based function in existence since colonial times, towards a planning role at the district level. This separated DMO functions from the medical superintendent who was subsequently in charge of the district hospital while the DMO was the medical officer at local government. The systemic effects of this first cohort would eventually resonate beyond the district-level:

> *"That was the first capacity building movement, simply getting a critical mass of MPH-qualified doctors into the system, and for them to be in critical positions, not only in district, but also eventually in regional and national levels". (Key Informant 5)*

DMO/DHMT decision-space expanded at this time by virtue of a new managerial profile, a concerted increase in capacities and numbers, and support of the PHC movement. Increased decision-making discretion and authority of district managers was further supported through dedicated district health financing mechanisms, which prioritised preventive over curative services. Throughout the 1980s, DHMTs were better resourced financially from Government of Ghana (GOG) than hospitals which were dependent on user fees (Nyonator & Kutzin, 1999).

Decentralisation reforms up until that time were expressed in the development of the district health system in a double manner: while broad administrative decentralisation reforms had been based on central government's vision of districts relating directly with the national level, with minimal regional intermediation (as no formal regional structures existed), historically, the health system had maintained strong regional directors from a practice of promoting very senior clinicians to regional medical officer roles. Such positions were powerful, and as a result, the health system kept to this model of operating rather than to relate directly to national level. Secondly, the district health system strategy preceded and was congruent with the PNDC vision of political decentralisation, thus district health development could ride on political support.

Earlier aborted efforts to reform the MOH were reignited in the Constitution of the Third Republic (1979) which specifically called for a Health Service. However, reform was again upended by military coup.

Period two: strengthening district health systems, 1986-1993

Formation of the district health system was followed up by efforts to strengthen decentralised management:

> *"Even though we had decentralised to a point, what we had could not address our problem. In other words, the problems were at the district level, but we hadn't gotten there to organise ourselves to be able to address the problems. So we started a programme called 'strengthening of district health systems', and we put [it] together". (Key Informant 1)*

The Strengthening District Health Systems (SDHS) approach of DHMT-based problem analysis and problem solving focused on self-identified needs, long-term working through problems, regular progress reviews and monthly feedback, with new questions arising for team-wide decision-making. While it built on ideas which were developing within the new cohort of DMOs, a WHO-facilitated pilot formalised SDHS activities in 1987 (Cassels & Janovsky, 1995). The success of SDHS was driven by its self-directedness and local-ownership: the close-knit nature of the DMO network, despite being scattered across the country, supported the development and sharing of management strengthening tools amongst themselves. Learning-oriented problem-cycles lasted 1.5 years, so that curriculum change and lesson-generation was incremental and organic.

The SDHS was critical for making DMOs/DHMTs better planners and advocates for their needs as district capacity increased, and thus increased managerial decision-space. For example, districts were able to negotiate their annual programming with national level such that national level could identify the activities to be done, but it would be up to the discretion of districts to plan the most suitable times of year to run the activities.

Increased district manager confidence resulted in districts making greater demands on the region. Regional and national levels, in turn, began to request more training for themselves to be better equipped to support newly-identified district needs. This developed the regional health management team. Consequently, regional structures became formalised. In this way the health system followed a bottom-up approach to reorganising the national-level structures.

Momentum of the SDHS waned by the early 1990s for several reasons. Firstly, earlier adopting regions had more rigorously applied the learned management practices compared to later adopting regions, partly because some practices had already become routinised and were thus subject to dilution effects – their novelty began to dissipate. Secondly, by the 1990s, financial support for the programming was shrinking due to overall resource constraint. Thirdly, by that same time, many of the initial core of DMOs who had led SDHS were no longer in the districts, but had moved on to regional and national-level positions.

Period three: planning of health sector reforms and creation of a health service, 1994-1996

By 1996, a sense of political urgency to create the health service recaptured earlier efforts to restructure the MOH. Partly, this was driven by a desire to wrest power from the military/political elites at the time who were perceived to be too involved in technical issues, and frustrating the sector with highly centralised management. Secondly, agitation from health professional associations who sought better remuneration and improved working conditions had caused politicians to placate them by covering their concerns with the forthcoming Act 525. Health professionals did not want to be local government staff, as there was a sense of medical specialists being better educated and more qualified than local government officials. Mission hospitals which provide services in most remote locales under the Christian Health Association of Ghana (CHAG) feared losing their identity by being subsumed under a government Service. As such Act 525 distinguishes the teaching, CHAG and security service (i.e. military and police) hospitals as being autonomous from districts –

these facilities are not part of the Ghana Health Service. All these factors outweighed any of sense of health system devolution as implied by Act 462.

Part of the rationale behind Act 525 was to reinforce the district health system by formalising DHMT structures, pay scales, qualifications and standards in the Service. Yet several operational challenges arose. First, no legislative instrument (LI) which accompany Acts of Parliament was drafted. Advice to draft the LI simultaneously as the bill was being drafted was not taken, and attempts to write the LI post-hoc floundered. The repercussions have been lacking legal operational guidance on how the GHS should correspond with the MOH, and the functional interactions between the DHMT and the District Assembly. As a result this sparked inter-ministerial concerns, with both MOH and MOLGRD. The creation of the GHS supplanted the reorganisation of the MOH, and created a perception of 'hollowing out' the Ministry:

> *"At the national level, because the MOH is not fully established...the GHS has found itself managing the MOH. The directors at national level have been performing the work of the Ministry in ways that compromise their own work as an agency charged with service provision". (Ghana Ministry of Health, 2001)(p. 37)*

Concurrently, concerns of MOLGRD becoming a super-ministry with the onset of full devolution were ignited. Yet, MOH had always been more powerful than MOLGRD in terms of resources and capacities. Act 525 further deepened administrative decentralisation of the health system, and caused MOLGRD to maintain its distance: if the GHS could not be contained by a relatively powerful MOH, then MOLGRD would not be able to handle them (Dubbeldam & Bijlmakers, 1999).

Finally, Act 525 ushered in key changes in the revision of the DMO role to a district director of health services (DDHS). This no longer limited leadership of the district to a medical qualification, but opened it up to other professionals, including pharmacists and nurses:

> *"It neutralised their power because now they cannot challenge the higher level clinicians". (Key Informant 3)*

> *"They were now waiting for HQ to tell them what to do. That is a limitation, and made the role more administrative". (Key Informant 2)*

This further erupted brewing conflicts between the clinical leadership of the district hospital versus the administrative leadership of the DHMT:

> *"Within the health service at district level there is longstanding conflict between the Medical Superintendent and DDHS – first of all because before the person becomes Med. Sup., he must have practiced minimum 5 years, whereas DDHS maybe has 3 years' experience." (Key Informant 4)*

> *"And so, who became the head of the district became an area of contention. There was a need to manage the hospitals but also a role for wider district supervision and coordination". (Key Informant 8)*

Period four: implementation of health sector reforms, 1997-2007

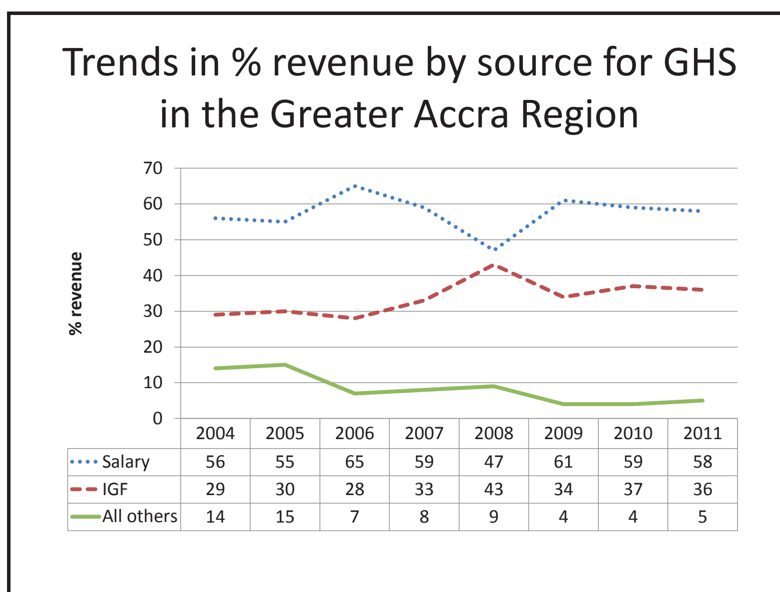
The Medium-Term Expenditure Framework (MTEF) had been introduced by the Ministry of Finance and Economic Planning (MOFEP) in 1988 to strengthen the national budgeting system. In 1996, financing reforms piloted in the health sector had been driven by national-level GHS and MOH leaders (many of whom were part of the original cohort of DMOs who went through SDHS) who had become dissatisfied with the proliferation of vertical programmes which were circumventing weak MOH management systems. While not referred to locally as a 'sector-wide approach' (SWAp), a holistic style of health sector development was undertaken during this period, which was a SWAp in essence. Development of the national health policy, Programme of Work (POW), and resources packages for medium term health plans were supported by Common Management Arrangements (CMA) to accomplish implementation and channelling/disbursing of funds, planning, budgeting, and audit, procurement, monitoring, evaluation and sector review. The CMA consisted of joint MOH-donor oversight of the sector, donor-pooled funds (DPF) managed by MOH, and strategic activities guided by the Medium Term Health Strategy and the five-year POWs 1997-2001 and 2002-2006. One of the main objectives of the CMA was to increase financing to the district health system by shifting the proportion of funds directly channelled to districts. By 2001 this had reached 42% from 34% in 1997. DPF was a major source of district financing, and was meant to be allocated quarterly. For a time DPF did increase the autonomy and adaptability of district managers to control their own planning. As part of the SWAp, the development of the concept of budget management centres at district level enabled district health managers to open District Director of Health accounts and manage their own budgets, rather than depending on the regional offices to manage their budgets; this further increased their decision-making space. However, DPF suffered from lower contributions than expected from donors (Addai & Gaere, 2001). Moreover, there was only partial correspondence between the MTEF's three-year cycle and the sectoral POW's five-year cycle, thus budgeting and planning did not occur simultaneously, and annual review processes as such could not influence planning processes (Short, 2003). At district level, the effects of the MTEF were constrictive. Its top-down standardisation of plans:

> "*was not very inspiring and not beneficial for creativity...[and] resulted in the loss of a sense of ownership and commitment and the loss of any opportunity for self-analysis and self-renewal...This meant discouraging leadership (bringing change and fostering creativity and innovation) even more*" (Adjei et al., 2010) (p. 59).

Toward the mid- to late-2000s, the proportion of earmarked to non-earmarked funds for the district health system began to shift. There were several reasons for this. First, donors who had been contributing to pooled funds as part of the SWAp moved towards multi-donor budget support (MDBS) in line with the principles of the Paris Declaration on Aid Effectiveness (2005). The result was a shifting of financial resource decision-making up to MOFEP and out of the health sector. This, paradoxically, strengthened the negotiation capacity of a unified donor bloc, and thus increased upward accountability towards development partners (Wood-Pallas et al., 2015). GOG funding to the health sector did not increase to fill the gap created by the loss of management of DPF, which seriously impacted

the district health system. Second, the Additional Duty Hours Allowance led to a rise in GOG personnel emoluments; part of the solution was to reduce allocations for recurrent expenditures and capital investments, thus resulting in a high proportion of the health budget being taken up by salaries (Agyepong et al., 2012). Third, the establishment of the Global Fund for HIV, TB and Malaria created parallel structures and further verticalised programme funds (Atun et al., 2011). At the same time as programme funding was increasing, the volume and degree of access to DPF under the SWAp was contracting due to the move of those funds into MDBS at the level of the MOFEP. This had the effect of contracting district manager decision-space at the level of the district health directorate. On the other hand, internal generated funds (IGF) which are collected by the hospitals and clinics that provide clinical care continued to rise. For a period this meant an increase in district hospital manager decision-space. However (and fourthly), with the introduction of the National Health Insurance Scheme (NHIS) another trend emerged. While the establishment of the National Health Insurance by Act 650 (2003) capitalised on widespread public dissatisfaction with user fees (Agyepong & Adjei, 2008; Carbone, 2011), its implementation shifted district financing such that as its use increased, extensive delays in fee reimbursements for services rendered (i.e., IGF) created financial shortfall at facility-level. Data for the period 2004 – 2011 from the Greater Accra Region exemplifies these trends which have had an effect of shrinking district-manager decision-space by contracting access to funds at the district-level: increases to the already-high proportions of salary and IGF relative to the reduction of other sources of funding (Government of Ghana funds for services and administration, programme funding and DPF) **(Figure 5.2)**.

Figure 5.2: Trends in percent revenue for the Greater Accra Region, 2004-2011



	2004	2005	2006	2007	2008	2009	2010	2011
Salary	56	55	65	59	47	61	59	58
IGF	29	30	28	33	43	34	37	36
All others	14	15	7	8	9	4	4	5

In an effort to support district-wide budgeting and planning, a composite budget system was introduced, which was meant to collectively produce one district budget at the district

assembly. However, because agencies continued to receive their budgetary allocations from their parent ministries vertically, MOFEP would reject district inputs, sending back individual budget line items to each parent ministry for explanation, thus compromising the composite budget exercise (Ayee, 1997). Importantly, the contraction of financial resources in the health sector led to power struggles between GHS and MOH over their control. This necessarily drew attention away from priorities of the district.

Health system leadership: progress over time

The vitalisation of the district health system over the fifteen year period from late 1970s to early 1990s was consistently attributed to the strong and persistent leadership of the Director of Medical Services (DMS). This proved a critical contextual element. As a leader who had experience working throughout various regions of the country, and at different levels of the health system, the DMS believed in and focused on a clear vision of the district, and acted as a buffer between the resistance of the old-guard health leadership, and a gradually confident young group of district managers. The initial cohort of DMOs was hand-picked and mentored, with ambitions of graduating them into regional and national level positions. Capacities which had been strengthened through SDHS further enabled those DMOs to steward the ensuing reform processes of the 1990s (Cassels & Janovsky, 1991). While many of the original DMO cohort did move into higher-level leadership positions at regional and national level, many of the early reformers left the system altogether (through retirement or international opportunities), and the visionary leadership gains were not widely systematised:

> *"Vision that grows with firm leadership can be ruptured when leadership changes". (Key Informant 6)*

> *"[The DMS] offered a certain type of leadership never previously offered, never offered since then. Those leaders were shown a preferred future: decentralised district health systems. They were recruited to help that vision. When they got to the top did they have a new dream? A new version of the vision, there doesn't seem to be one." (Key Informant 3)*

> *"We did not have a concrete, institutionalised performance system, so all rested on a tradition of individuals being determinants of everything." (Key Informant 5)*

The lack of effective leadership replacement strategies also impacted the waning of the district health system. As those who had formative district experiences were replaced by leaders who perhaps did not uniformly have the same background, exposure or priorities to advocate for the channelling of greater funds to the district, the capacity of district decision-making diminished:

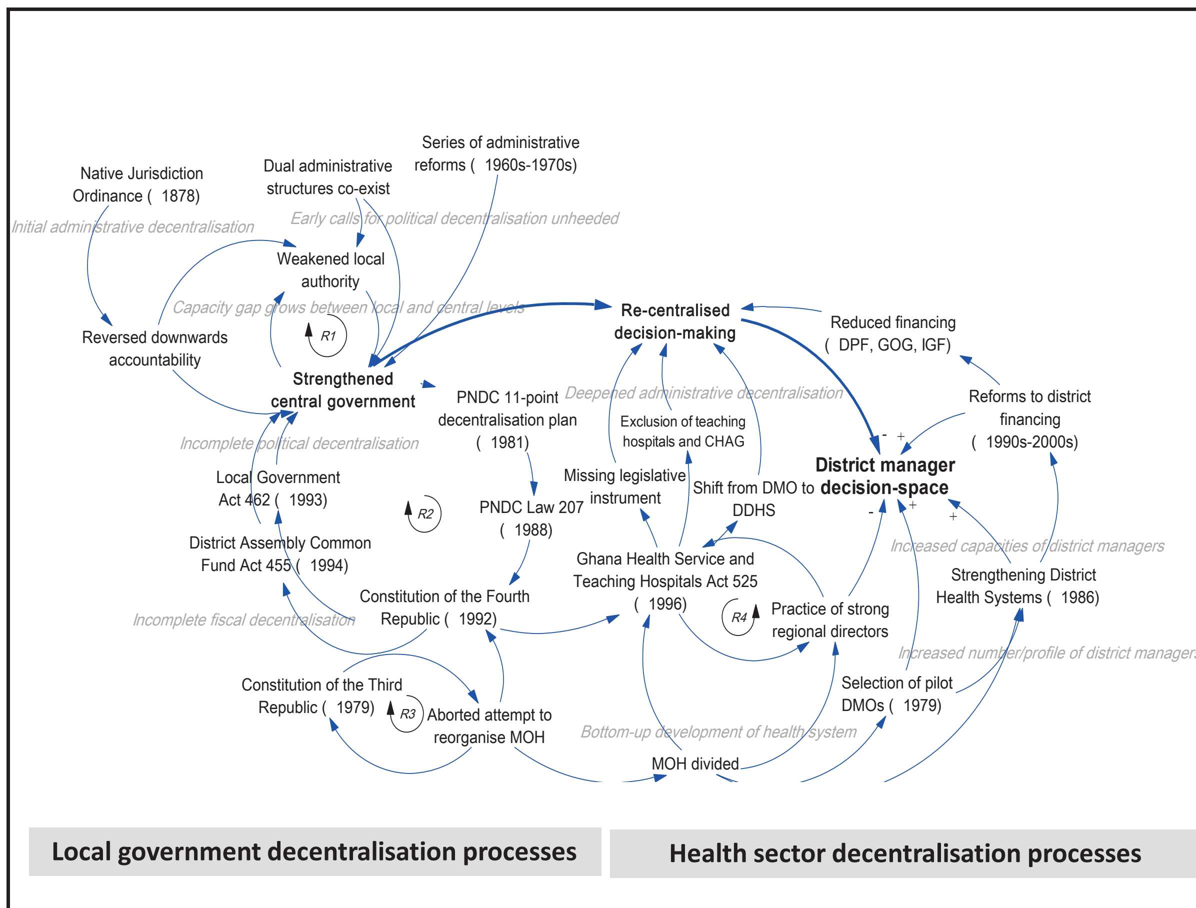
> *"The common basket idea began to break down. The next batch of leaders was weaker than the earlier crop. Donors began to pull out money, and they were allowed to do so". (Key Informant 7)*

DISCUSSION

Our findings underscore the fact that not all decentralisation processes empower local actors, thereby validating Falleti's sequential theory of decentralisation. We demonstrate that in Ghana, an initial process of administrative decentralisation, followed by a century of administrative decentralisation reforms, and incomplete and limited political and fiscal decentralisation, resulted in a limited shift of power from national to subnational levels. While the origins of district health system development were in fact bottom-up, the broader governance tendencies towards centralisation destabilised it. The micro-processes of district health system development (i.e., those internal to the district health system) appear to follow *reactive* feedback mechanisms of linear progress, whereas the macro-processes of district health system development (i.e., those which concern the district health system as a part of broader governance reforms) appear to be subject to *self-reinforcing* feedback mechanisms of centralised decision-making. We see from our analysis that district manager decision-space expanded steadily during periods (1) and (2) of district health system development, due to concerted efforts to increase the number and profile of district managers, strengthen managerial planning and advocacy capacities, and prioritise district financing mechanisms. During periods (3) and (4), a loss of agility arose out of the formalisation of GHS structures. Though there was a time of augmented district financing, this was not sustained. The contracted access to financial resources and increased upward accountability has led to a steady attenuation of district manager decision-space in recent years.
We summarise these mechanisms in **Figure 5.3** as a causal loop diagram (CLD) using Vensim® software (Ventana Systems Inc). CLDs are useful visualising tools, which represent systemic patterns, interactions between variables, and the direction of causal influence. CLDs capture feedback mechanisms in a causal pathway, which can be reinforcing (R). Figure 3 displays multiple reinforcing loops. R1 shows the initial administrative decentralisation of the Native Jurisdiction Ordinance led to reversals in downward accountability through a dual mechanism of weakening local authority and strengthening central government. The self-reinforcing nature of this dynamic was further driven by repeated administrative decentralisation reforms over an extended period of time and the continuation of parallel administrative structures. R2 shows the strengthened central government position at the onset of political decentralisation which drove the nature of fiscal and political decentralisation, further strengthening central government and giving rise to a centralised decision-making tendency within government. R3 shows the earlier failed attempts to reform the MOH and create a health service which fostered political need, and informed constitutional reform and the passing of Act 525. Act 525 in itself was an administrative decentralisation reform. The contextual factors surrounding its passing (historical practice of strong regional directors (R4), exclusion of CHAG and teaching hospitals, shifting DMO role to DDHS, and the missing LI) led to a centralisation of decision-making within the health sector – however this tendency was also driven by an existent centralising tendency. In the formalisation of health system structures much of the bottom up development of the district health system was eroded. Gains made in district manager decision-space over the 15 year period from the late 1970s to mid-2000s – selection of the initial cohort of DMOS, increasing district-wide managerial capacities through the

SDHS, and district financing reforms (represented by positive arrows) – were ultimately dampened because of a loss of fiscal autonomy and re-centralised resource decision-making.

Figure 5.3: Causal loop diagram of decentralisation feedback mechanisms in development of district health system and manager decision-space in Ghana



A recent study of five countries in Asia showed that political and social episodes in a country's development do present key junctures in health system evolution (Grundy et al., 2014), thus underlining the importance of this kind of analysis. Especially in the case of understanding how SWAps affect the balance of district-level empowerment, several studies show SWAps to have less-than-desirable effects: SWAps tend to be inherently reinforcing to national-level decision-making, particularly in allocation decisions and national management planning systems (Peters & Chao, 1998); they are less effective when development partners wish to be free from instrumental constraints, or perceive national government as lacking leadership and management capacities (Buse, 1999); and have even been referred to as "*top-down development programmes*" (Natuzzi & Novotny, 2014)(p. 79).

Our paper is further relevant to revitalised debates on decentralisation. In Ghana, there are efforts to embark on the next phase of decentralisation reforms by implementing 'full' devolution to a Local Government Service under the authority of District Assemblies, according to Local Government Service Act 656 (2003) (Ghana Ministry of Local Government and Rural Development, 2003; Joint Government of Ghana & Development Partners, 2007). Initiating implementation of Act 656 has not been without its contentions, as an overall policy framework is still missing to guide its operationalisation in the health sector. Act 656 raises a multitude of questions about the future role and function for national and regional-level GHS structures, capacity weaknesses at district level (Kapiriri et al., 2003), vested interests of health professionals, and requisite district financing (Francis & James, 2003). As these reforms are ongoing, this line of inquiry represents future areas of research. It is clear, however, that the district health system currently reflects a systemic lack of coherence between district managerial responsibilities and accountabilities. Serious rethinking of district financing and authority is imperative in order to achieve health goals.

CONCLUSIONS

We conclude that the erosion of early gains made from bottom-up development of the district health system, and shrinking district manager decision-space in Ghana have emerged due to the self-reinforcing centralising tendency of government decision-making. This is as a result of dominant administrative decentralisation processes over time, followed by incomplete political and fiscal decentralisation, thereby empowering national-level against district-level interests.

CHAPTER 6.

Care decision-making of frontline providers of maternal and newborn health services in the Greater Accra Region of Ghana

"At the hospital the number of midwives that I have is a big challenge. Because of the Millennium Goals 4 and 5 we need midwives in order to tackle these things and focus on antenatal care. The midwives that I have currently are not enough. They are doing their best. They used to complain. They are doing all that they can. What three midwives will have to do, one midwife will have to stand in for that. What of if the lower facility is equipped with midwives and obstetricians and the logistics and everything is there? There wouldn't be the need to transfer clients from here to the regional hospital. Everything will be done at the local level." (A hospital manager)

ABSTRACT

Objectives: To explore the 'how' and 'why' of care decision making by frontline providers of maternal and newborn services in the Greater Accra region of Ghana and determine appropriate interventions needed to support its quality and related maternal and neonatal outcomes.

Methods: A cross-sectional and descriptive mixed method study involving a desk review of maternal and newborn care protocols and guidelines availability, focus group discussions and administration of a structured questionnaire and observational checklist to frontline providers of maternal and newborn care.

Results: Tacit knowledge or 'mind lines' was an important primary approach to care decision making. When available, protocols and guidelines were used as decision-making aids, especially when they were simple handy tools and in situations where providers were not sure what their next step in management had to be. Expert opinion and peer consultation were also used through face to face discussions, phone calls, text messages, and occasional emails depending on the urgency and communication medium access. Health system constraints such as availability of staff, essential medicines, supplies and equipment; management issues (including leadership and interpersonal relations among staff), and barriers to referral were important influences in decision making. Frontline health providers welcomed the idea of interventions to support clinical decision making and made several proposals towards the development of such an intervention. They felt such an intervention ought to be multi-faceted to impact the multiple influences simultaneously. Effective interventions would also need to address immediate challenges as well as more long-term challenges influencing decision-making.

Conclusion: Supporting frontline worker clinical decision making for maternal and newborn services is an important but neglected aspect of improved quality of care towards attainment of MDGs 4 & 5. A multi-faceted intervention is probably the best way to make a difference given the multiple inter-related issues.

KEYWORDS
Care Decision making, frontline health workers, Maternal and newborn health, MDGs 4 & 5, Quality of care

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INTRODUCTION

Between 1990 and 2015, Millennium Development Goal (MDG) 4 calls for a reduction by 2/3 of the under-five mortality rate; and MDG 5 for a reduction by 3/4 of the maternal mortality ratio (United Nations, 2010). Progress towards achievement of MDGs 4 & 5 has remained slower than desired in Ghana and other countries of sub-Saharan Africa (Bhutta et al., 2010; Ghana Statistical Service et al., 2009a; Hogan et al., 2010; Kinney et al., 2010; The Partnership for Maternal Newborn & Child Health, 2012; UNICEF, 2012; WHO, 2010). Maternal and neonatal deaths are caused by a complex interaction of economic, financial, social, cultural and service access and quality factors. In Ghana, there is reasonable access to antenatal care (ANC) with about 95% of women 15 – 49 years receiving ANC from a skilled provider (value is 95.7% (Ghana Statistical Service et al., 2009a) in the Greater Accra region). Delivery by a skilled provider is lower with a national average of 59% (Ghana Statistical Service et al., 2009a), and 84.3% in the Greater Accra Region (Ghana Statistical Service et al., 2009a). A free maternal care policy was introduced in four regions of Ghana in 2003, and subsequently in 2005 to the whole country to reduce financial access barriers. Assessment suggested that though the policy had led to increases in institutional deliveries, institutional maternal mortality rates had not decreased (Ansong-Tornui et al., 2007; Bosu et al., 2007; Penfolds et al., 2007; Witter et al., 2009). Quality of service within facilities remained problematic, and is considered to be partly responsible for the persisting high national average maternal mortality rate (MMR) estimated at 451 per 100 000 live births and neonatal mortality rate (NMR) of 30 per 1,000 live births (Ghana Statistical Service et al., 2009b; UNICEF, 2008). Gaps identified in the quality of care given to pregnant women when they use health facilities include decisions on management, as well as information given to women by frontline providers (Deganus & Tornui, 2006).

As providers interact with clients, they continually make decisions about client needs and the appropriate service to provide. Potentially important supports for this process are availability and use of evidence based/informed decision-making guidelines and tools that improve and make performance more consistent, by reducing guesswork and promoting compliance with standards (Kim et al., 2005). In evaluating the effectiveness of alternative training models and other performance improvement factors on the quality of maternal care and client outcomes through the safe motherhood programme in Ghana, it was found that about 21% of intervention and comparison facilities still did not have clinical management protocols and guidelines at the front line (Health Research Unit Ghana Health Service et al., 2005). However, beyond availability is whether when available, evidence-informed guidelines are extensively used and important drivers of frontline provider care decision making. A cross-country comparison of maternal health guidelines in Burkina Faso, Ghana and Tanzania concluded that format of guidelines and implementation strategies, rather than poor quality of content or lack of evidence was the major barrier to positive impact of guidelines on quality improvement (Baker et al., 2012). Clearly, there are other important factors to clinical decision-making than just evidence-based guidelines (Dopson et al., 2002). An ethnographic study in the UK found that primary care clinicians (general practitioners and practice nurses) derived their individual and collective health care decisions from 'mind lines' or "*collective reinforced, internalised tacit guidelines*" rather than practice guidelines

(Gabbay & Le May, 2004). The importance of tacit knowledge in decision making is documented from other studies (André et al., 2002).

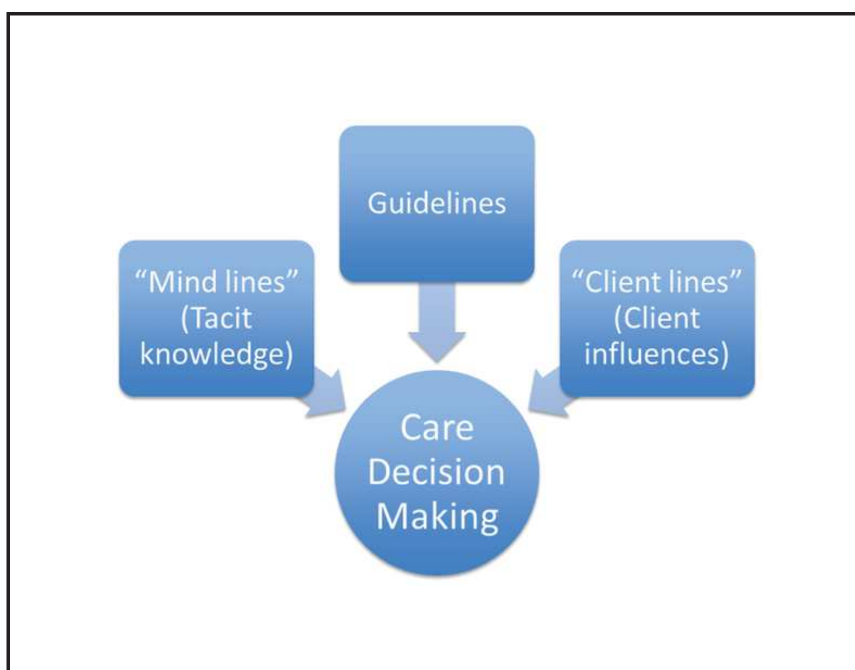
The current study focused on understanding the 'how' and the 'why' of care decision-making for clients needing maternal and newborn health services by frontline providers (doctors, midwives, public and community health and family planning nurses) in the Greater Accra Region, one of the ten administrative regions of Ghana. Its estimated population of almost four million is 15% of Ghana's population. It is almost 90% urban, well above the national average of about 45%. It has one of the highest population growth rates in the country despite having the lowest total fertility rate in the country (2.5%), well below the national average of 4% (Ghana Statistical Service et al., 2009a). Migration in from poorer regions of the country is a major contributor to the high population growth. This massive rural urban drift may account for the fact that it is the only region in Ghana that showed a rise in poverty levels in the 2005/06 Ghana living standards survey (Ghana Statistical Service, 2008). The percentage of the population living below the poverty line that had dropped in the region from 23% in 1991/92 to 4% in 1998/99; rose to 11% in 2005/06. Even with this rise it remains the region with the lowest poverty levels in Ghana, well below the national average of 52%. The region had a pregnancy related mortality ratio of 448 (95% CI 268 – 578) per 100,000 live births in the 2007 Ghana Maternal Health survey compared to the national average of 416 (95% CI 313 – 520) (Ghana Statistical Service et al., 2009b). Neonatal mortality in the region for the 10 year period before the 2008 Ghana Demographic and Health survey was 21 deaths per 1,000 live births (Ghana Statistical Service (GSS), 2009), as compared to the national average of 27/1000 live births.

OBJECTIVES

The objective was to explore 'how' and 'why' care decision making for maternal and newborn care by frontline providers (doctors, clinical, public and community health nurses and midwives) is done; and interventions that would be most appropriate to support and improve the quality of care decision making.

Based on a non-exhaustive review of the literature (Dopson et al., 2002; Gabbay & Le May, 2004; Miles et al., 2007; Theodorou et al., 2009; Turner, 2009; Wagai et al., 2009) as well as a discussion of the observations and experiences of the members of the research team who had worked with frontline providers of reproductive and neonatal health services in the study setting, the study started off with a simple conceptual framework that theorised that care decision making of frontline providers was influenced by clinical guidelines, 'mind lines' or tacit knowledge and 'client lines' or client influences related to the preferences and pressures of the client and the wider family and community, including social, religious and cultural values and beliefs. This is shown as **Figure 6.1**.

Figure 6.1: Initial conceptual framework of the study



METHODS

A mixed-method, exploratory, cross-sectional and descriptive case study of frontline provider decision making was carried out between July and December 2011 in the Greater Accra Region of Ghana. Data collection involved a desk review of maternal and child health evidence-based guidelines and decision-making tools available in Ghana, focus group discussions (FGDs) and administration of a structured questionnaire with closed and open ended as well as observational checklist type items for actual guideline availability to frontline staff. The Ghana Health Service Ethics Review Committee gave approval for the study (GHS-ERC 02/09/11). Written informed consent was obtained from all participants. No potential respondent opted out of the study during the study period.

For the desk review, a search was conducted of records and libraries of Ghana Health Service and development partner agencies supporting maternal and neonatal health. Interactions with agency representatives to explain what was being searched for was used to selectively target the search. Guidelines were defined as written materials whether books, booklets, charts, leaflets, posters or simple aids like diagnostic wheels; providing information, directions and guidance to aid frontline staff in clinical decision-making and case management of clients presenting for maternal and newborn health care services whether preventive, promotive or curative.

The Greater Accra Region contains the capital city of Ghana, Accra. Of the 10 local government districts in the region at the time of the study, two were metropolitan and six municipal and contained almost 80 – 90% of the population. The remaining two were rural. For the primary data collection, a district was randomly selected from each of the 3 categories of metropolitan, municipal and rural by simple ballot. This categorisation was used because observation suggests that urbanisation affects health service availability. Staff are more reluctant to be posted to the rural districts and social and communication infrastructure such as road networks and internet access are more limited. Though there are no constraints with staff accepting postings to the municipal districts, population growth in these areas has outstripped infrastructure. The municipal populations are therefore generally less well served with health facilities than the metropolitan. In the metropolitan district, the size of the population (almost two million) is such that service delivery is further decentralised to the sub-metropolis. Therefore one sub-metropolis was selected randomly by simple ballot from amongst the six sub-metropolitan districts. District managers, midwives, community health officers, public and community health nurses, medical assistants, and doctors were invited to participate in FGDs. Participants were conveniently selected based on their availability and willingness to participate. The FGDs were structured so as to not disrupt service delivery or provision of care to clients. Staff run eight to twelve hour shifts depending on category; and also have days off. Staff were invited to participate in the FGDs during their off-period. Reimbursement of transport to and from the FGD venue was provided.

FGDs were conducted to gain perspectives from these staff on how and why they make their client care decisions, needs and potential components of an intervention to support care decision-making. Five FGD sessions, each lasting an average of two hours with between 6 to 10 participants per session were held with staff grouped into those providing similar kinds of service as follows: heads and managers of facilities providing RCH services; midwives; family planning, public and community health nurses; medical doctors and medical (physician) assistants.

Notes were taken during the FGDs, in addition to recording and transcribing the interviews. All FGD data analysis was done manually looking for themes, commonalities and contrasts using an inductive approach. Exploration was done for the themes in the starting framework as well as themes that had not been captured in the starting framework, but were emerging in the interviews. The interviews were stopped when the analysis was not yielding any new insights beyond what previous FGDs had already yielded. Analysis of each FGD was done by at least two team members who then discussed and compared notes. The analysis was discussed with all team members before concluding.

The results of the FGDs informed the revision of the draft of a structured questionnaire with closed and open ended as well as observation checklist items for use with frontline staff to obtain more quantitative data as part of triangulation. The questionnaire was pre-tested with frontline staff in a non-participating sub-metropolis. The final questionnaire was interviewer-administered. Variables on which data was collected included availability of centrally developed care decision making support tools and guidelines, locally adapted or

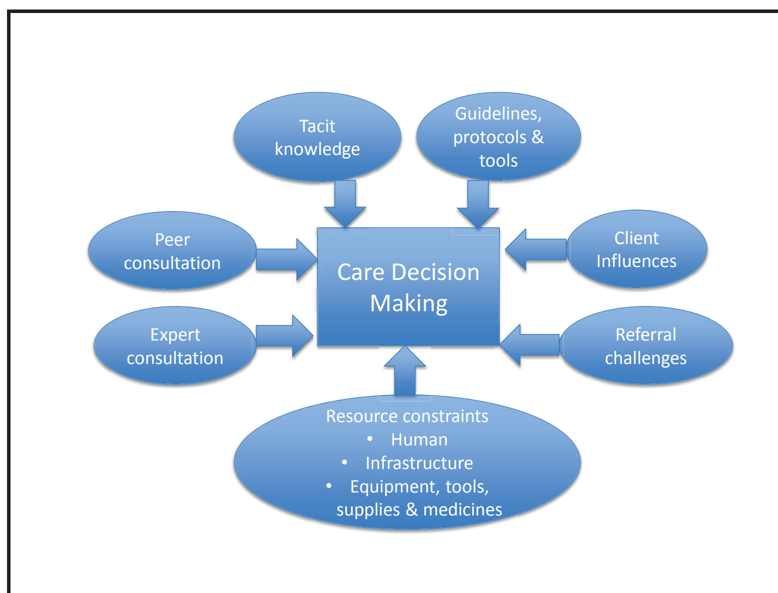
developed tools and guidelines, actual use, familiarity with guidelines content, management of referrals, common communication mechanisms and channels and their ease and convenience of use, including use of mobile phones and internet and access to expert advice and information.

Facilities in the study areas where interviews were administered to frontline staff were three district level hospitals, two polyclinics, one health centre and two urban and six rural Community Health Planning and Services (CHPS) zones. All those at post during the week of the interviews were interviewed. If staff were busy, e.g. with an emergency, interviewers returned at a more opportune time. Fifty (50) staff members providing antenatal, delivery, postnatal and newborn care services and fifteen (15) staff members providing family planning services were interviewed. The interviews were conducted at their points of service delivery, except for the community health nurses working in CHPS zones in the community who had to be tracked down within the community. Data was entered in Excel and then imported to and analysed in STATA®. The interviews provided quantitative data, which is presented simply as numbers of responses and percentages.

FINDINGS

The 'how' and 'why' of frontline provider decision making – FGD findings
In the FGDs, frontline providers raised a series of factors, explaining the 'how' and the 'why' of their decision-making. The information from the FGDs led to an expansion of the simple starting theoretical framework as, summarised in **Figure 6.2** and explained below.

Figure 6.2: Final conceptual framework of the study



All the three factors we theorised in our starting framework as important in decision-making emerged as such during the FGDs. Tacit knowledge or 'mind lines' (Gabbay & Le May, 2004) was a common 'how' of care decision-making. Frontline providers indicated that tacit knowledge is acquired over time from both pre-service and in-service training, and the "*rich experience*" and skills acquired on the job.

> *"You don't want to have a maternal death – that is the first thing that flashes through the mind; that this patient must not die, and that gives you the drive….after you've thought of that, then you look at the patient's clinical condition. Then, all the stuff that you have in your head begins to pour…."* (Physician in charge of a district hospital)

Also influencing how decisions were made was the availability and content of evidence-based guidelines, protocols and tools. Respondents said they referred to these, especially when not sure what their next step in management had to be. They preferred protocols tailored to the level of service provided at the facility. Handy sized and user friendly rapid assessment tools such as wall charts on management protocols were mentioned as more used on a routine day to day basis than bulky comprehensive documents, which were used as references.

'Client lines' as in our starting theoretical framework came out in the FGDs as influencing clinical decision-making. In choice of a family planning method, staff indicated that they sought to understand these influences and accommodate them – to the extent possible – in decision-making. In other cases, especially where providers felt the client's life was at risk, client refusal to accept some decisions could create provider frustration and life threatening dilemmas.

> *"….some of the religious and societal interference on decisions taken for patients…. For example, a pastor tells a patient that he has seen a vision that after the operation she would die. It is a big challenge because even for (the sake of) their babies they wouldn't allow you to do anything for them…..…"* Midwife

In addition to the three factors in our framework, other major factors affecting decision-making emerged in the FGDs necessitating a revision of the framework. The ability to obtain expert opinion influenced care decision-making. Communicating with respected senior colleagues and authorities or sometimes peers to ask opinions was done in the form of phone calls and text message, and occasionally by email if face to face was not possible. For on-the-spot decisions, phone calls and text were preferred as faster, as internet access is unavailable at most work stations. On a more long-term basis, face-to-face meetings and discussions supported peer learning and consultation and enhanced tacit knowledge.

Challenges surrounding the referral process emerged as a consistent theme influencing decision making and sometimes making the decision to refer a very difficult one. They included inadequacies of ambulance services such as insufficient numbers of vehicles, and delays due to traffic; waiting time to see a doctor, lack of beds, or on-duty doctor, resulting in the need for clients to be transferred elsewhere; client financial constraints, whether for

payment of travel costs, or supplies not covered by the National Health Insurance Scheme; and the quality of the client reception at the referral point, including relationships between facility staff, as well as towards referred clients.

Several instances were cited where clients refused referrals for logistic and service responsiveness reasons such as the travel distance, time and money involved as well as the uncertainty of the kind of reception they would get at the receiving hospital.

> *"……..patients refuse to go on referral. .... They don't understand why you are there and you ask them to go to another hospital……. some will not go at all. Some will go but will keep long (delay) before they go….Some ….. will tell you 'Okay, give us money so that we go'."* Nurse midwife

Also influencing care decision making were health system resource constraints such as availability of staff, medicines, supplies such as oxygen and equipment, management issues (including leadership and interpersonal relations among staff). A repeated concern was the inadequate numbers of senior professionals who frontline workers could confer with whether by phone or face to face when confronted with a decision making challenge. Some frontline workers thought they could very easily have managed some cases they have had to refer if only someone had been accessible to talk and guide them through the appropriate management.

The remote location of some facilities was also cited as a challenge in decision-making by staff from the rural districts. It affected what was the feasible decision as opposed to the optimal decision in a given situation. An emergency case whose chances of survival depended on needed care in under an hour might have to be managed as best as possible in the local facility despite limited capability; if the shortest time to get to a higher facility was several hours at best.

Importantly, these factors often influenced clinical decision making interactively rather than independently. Thus for example, information from discussion with a peer could go to enhance the tacit knowledge pool; and referral challenges could be influenced by the availability or otherwise of expert consultation. This is conceptualised in the theoretical framework by the lines linking the boxes into a closed whole.

Evidence Based guidelines and decision making tools – Desk review

The desk search for frontline provider evidence based guidelines and decision-making support tools related to maternal and newborn care endorsed for use in Ghana by policy-makers revealed those listed in **Box 6.1**.

Box 6.1: Overview of evidence based guidelines and decision making support tools for maternal and newborn care

Frontline provider of maternal and newborn services Evidence Based Tools and Guidelines locally available in Ghana (have been adapted by Ministry of Health (MOH)/Ghana Health Service (GHS) from internationally available guidelines and protocols for specific local use in Ghana):

1. *Ghana Health Service (2008) National safe motherhood (SM) service protocol*. Provides guidance on the provision of effective antenatal, delivery and postnatal care.
2. Ghana Health Service (2007) The *National family planning protocols manual*. Various user friendly job aids, such as flipcharts, counseling cards and leaflets have been adapted from this manual.
3. Reproductive Health Service Policy and Standards (2003) is a protocol on abortion care. The *Ghana standards and protocols on comprehensive abortion care*, is adapted from this manual
4. Ministry of Health – Ghana National Drugs Program (2011) Standard Treatment Guidelines (STG). These have been in use in Ghana for over a decade and are revised periodically. They are generic for clinical care as a whole rather than specific for maternal and newborn care.
5. Local adaptation of the WHO Integrated Management of Neonatal and Childhood Illness (IMNCI) manual and chart booklets by Ghana Health Service. The IMNCI manuals provide guidance on Integrated management of neonatal and childhood illnesses.
6. Ghana Health Service (2006) Prevention and Management of Unsafe Abortion: Comprehensive Abortion Care Services, Standards and Protocol, June 2006. This document is used as a guide to facilitate the provision of Comprehensive Abortion Care services to help reduce unwanted pregnancy and abortion related morbidity and mortality in Ghana.
7. Improving access to quality care in Family Planning (FP), Medical Eligibility Criteria for contraceptive use (MEC Wheel) (2008). It contains information on medical eligibility for starting use of contraceptive methods. It directs family planning providers on which contraceptive method is the safest and most effective for a woman requesting family planning services.

References

1. Ghana Health Service (2008) National Safe Motherhood Service Protocol. Printed in Ghana by Yamens Press Limited, Accra, Ghana, West Africa. P.O. Box AF 274, Adenta-Accra. Tel: +233 302 223222/235036. Email: yamenspressltd@yahoo.com
2. Ghana Health Service (2007) National Family Planning Protocols. Printed in Ghana by Yamens Press Limited, Accra, Ghana, West Africa. P.O. Box AF 274, Adenta-Accra. Tel: +233 302 223222/235036. Email: yamenspressltd@yahoo.com
3. Ministry of Health /Ghana Health Service (2003) Reproductive Health Service Policy and Standards
4. Ministry of Health (GNDP) Ghana (2010) Standard Treatment Guidelines 6th Edition. Ghana National Drugs Program (GNDP), Ministry of Health P.O. Box MB 582 Accra, Ghana. Available: http://ghndp.org/images/downloads/stg2010.pdf
5. World Health Organization (2006) Integrated Management of Neonatal and Childhood Illness chart booklet. WHO. 20 Avenue Appia 1211 Geneva 27, Switzerland
6. Ghana Health Service (2006) Prevention and Management of Unsafe Abortion: Comprehensive Abortion
7. Improving access to quality care in FP, Medical Eligibility Criteria for contraceptive use (MEC Wheel) http://whqlibdoc.who.int/hq/1996/WHO_FRH_FPP_96.9_eng.pdf

Findings from frontline staff interviews

Data from the interviews is summarised in **Tables 6.1** and **6.2**. A single asterix (*) means sum either greater or less than 100% due to elimination of decimal points. A double asterix (**) means the family planning clinics in the study did not have any locally modified or developed guidelines.

The majority of the staff interviewed providing general maternal and newborn care services were nurses (44/50). Of the remaining 6, three were doctors and 3 were physician assistants. All the 15 family planning service delivery staffs were public and community health nurses.

Almost all the providers of general maternal and newborn care services (96%) said they regularly used some aids in their daily clinical decision making. Printed protocols and guidelines were the most commonly selected (96%). However workshop materials (92%), expert advice (90%) and telephone calls for advice (85%) were also frequently selected as aids in daily decision making.

Observation of guidelines actually available at the service delivery point showed that the commonest were the safe motherhood protocol (66%), and the standard treatment guidelines (78%). Twelve of the staff (24%) had other reproductive and child health protocols. Only one respondent had the IMNCI protocol. The year of publication for the safe motherhood protocol ranged from 1999 to 2008; and that of the standard treatment guidelines from 2002 to 2011.

Fourteen (14) out of the 15 family planning nurses had the family planning protocol, 9 had the WHO guidelines on Family Planning while 11 had the Medical Eligibility Criteria Wheel.

The majority of respondents (80%) said they had access to various local (institutionally) modified or developed guidelines and protocols e.g. management of postpartum haemorrhage, management of pre-eclampsia/eclampsia, management of antepartum haemorrhage, active management of the third stage of labour, neonatal resuscitation, managing prolonged labour etc. These guidelines were all modifications of the existing national or international protocols, and were modified to either suit the level of care provision or convert them into 'easier to refer to' charts. Compared to the safe motherhood protocol, 88% of respondents found the modified guidelines easier to use.

Only 39 out of the 50 providers of general maternal and newborn care services indicated they had access to a facility or official phone at point of service delivery to use for work related calls. Personal mobile phone ownership on the other hand was universal. Forty seven out of the 50 staff indicated that they were always able to use their mobile phones to call for help when faced with an emergency.

Seventy eight percent of staff (38/50) used text messaging on their mobile phones for any reason – whether work or non-work related. Of the staff who used text messaging (N=38); the majority (20) used it several times a week, 11 occasionally and 7 at least once a day. Internet use was lower, with only 23/50 (46%) of staff indicating they used the internet. There was no noticeable difference between the rural, municipal and urban staff.

Consulting senior colleagues for advice when faced with critical decisions was common (76%). There were no specialists in the peripheral primary care units, which were the focus of this study. However, 82% of staff indicated that they were able to access an obstetrician for advice by phone if they needed to.

Just about half of respondents (48%) had attended an in-service training on reproductive and child health in the year 2011, but eighty four percent (84%) had regular clinical meetings at their facility, though the frequency of these meetings varied from facility to facility.

The average travel distance between referring and receiving facilities was 52 minutes, with the longest being two hours. Reasons for preferentially choosing one referral facility over the other varied, and included previous experiences with reception at the receiving facility, as well as the perception of how equipped or ready the receiving facility was perceived to be in managing emergencies. Regarding challenges with referrals, 72% of respondents cited lack of transportation as a major barrier, as against 62% and 54% for patient's refusal to be referred and poor reception at the receiving facility respectively.

Supporting frontline worker care decision-making

All respondents in the FGDs were enthusiastic about the idea of putting in place some kind of intervention to support care decision-making. Importantly, frontline workers felt that any intervention ought to address the multiple challenges at the same time. For emergency cases, the availability of working phones to make phone calls was considered important as a way of reaching experts. A help centre/hotline model where staff could call in and be linked to an expert to discuss difficulties and get feedback was suggested. Text messaging was suggested as a way of providing daily tips, which could be of use to front-line staff. District linkages were also mentioned as a way of supporting decision-making in a systemic way. Specialists could be assigned to a catchment area, and the linkages would cascade, such that community and sub-district level staff could call up to the district and districts could call across or up to the regional level as well. The importance of a feedback loop to the callers was also raised.

Use of the internet was considered to be useful on a long-term basis in terms of information provision to enhance knowledge. Protocol websites, medical journals, and social networking were all mentioned as ways of using the internet. Additionally, the networking of facilities to one another was deemed a useful way to ensure continuity of patient information for referral.

Face-to-face meetings, 'in-house' workshops, mortality conferences and team discussions were also mentioned as ways of sharing information and learning among staff. Respondents noted the need for a regular frequency of such meetings.

Other considerations raised included the fact that any intervention should be cost-effective to the end-users, and should also have a capacity strengthening component. Regarding capacity strengthening it was felt that there needed to be better methods of ensuring team-

wide opportunities of information sharing as not all staff had opportunities to attend in-service trainings. Furthermore, respondents felt that an emphasis should be placed on building confidence and competence, and that training should be practical and not only theoretical. Continuous self-education was mentioned as a desired objective.

Also mentioned were making protocols and guidelines readily available at the workplace, providing periodic refresher training, providing essential logistics to work with, access to expert opinion, availability of an efficient ambulance service, easy accessibility of referral centres, increase in number of essential staff/personnel at the point of service delivery, accessibility of specialists by phone and provision of official phones at points of service delivery.

At the end of the structured interviews, each staff interviewed was asked a concluding open ended question: "*List three ways in which you believe you can best be assisted to make the right decisions at the point of service delivery when faced with an emergency and uncertain as to what to do*". The suggestions raised are closely related to the suggestions above from the FGDs as the analysis of their categorised responses in table 6 below shows. Since staff could make up to three responses, the total number of suggestions (171) is greater than the sample size of 65. The most frequent response was for printed guidelines and protocols, closely followed by access to senior and more experienced and skilled colleagues to provide advice. Next was adequate provision of equipment tools and supplies. These were generally very basic items taken for granted in more developed economies such as oxygen cylinder, speculum, lithotomy couch, ultrasound scan, computer, internet access etc. In one case the lack of a theatre for emergency obstetric procedures was mentioned. The fourth most frequent set of responses were for work telephones. Initially work telephones were classified with equipment, tools and supplies, but observing the frequency of the requests for that particular item, it was separated out.

The individual staff responses reflect the responses from the FGDs, thus strengthening the validity of the conclusions of the FGD analysis. Additionally, they enable some quantification of the relative importance of the different expressed areas of need for supporting and strengthening decision-making by frontline providers of MDGs 4 and 5 related services in the study area. The responses also show the inter-relatedness of the issues. Thus the requests to be provided with telephones for work related calls were generally related to the request to facilitate the ability to quickly consult an expert for advice when in a dilemma. Though almost all staff had personal phones, using those phones for work related calls meant piling up phone bills to be paid for personally out of pocket for official work calls. The request for 'work telephones' was effectively a request for the institution to bear the cost of work related calls.

Table 6.1: Data from questionnaire survey of Maternal and Child Health (MCH) service provision staff (Doctors, Medical Assistants, and Nurses) and Family Planning (FP) service provision staff

Variables	Rural district			Municipality			Sub-metropolis			Total			% of all respondents
	MCH staff	FP staff	Total	**MCH staff**	FP staff	Total	**MCH staff**	FP staff	Total	**MCH staff**	FP staff	Total	
	N=16	N=6	N=22	N=16	N=5	N=21	N=18	N=4	n=22	N=50	N=15	N=65	
Mean age in yrs (SD)	35.8 (10.4)	39 (12.6)		44.4 (12.0)	50 (5.7)		45.8 (11.0)	50.5 (6.4)		42.7 (11.7)	45 (10.7)		
Male	1	0	1	1	0	1	1	0	1	3	0	3	5%
Female	15	6	21	15	5	20	17	4	21	47	15	62	95%
Highest education													
Primary	0	0	0	1	0	1	0	0	0	1	0	1	2%
Secondary	1	0	1	0	0	0	0	0	0	1	0	1	2%
Post-secondary non tertiary	13	6	19	8	2	10	14	3	17	35	11	46	71%
Undergraduate	2	0	2	4	2	6	1	0	1	7	2	9	14%
Postgraduate	0	0	0	3	0	3	3	0	3	6	0	6	9%
Non-respondents	0	0	0	0	1	1	0	1	1	0	2	2	2%
Status of facility *													
District hospital	8	2	10	3	0	3	8	2	10	19	4	23	35%
Polyclinic/health centre	4	3	7	12	3	15	8	2	10	24	8	32	49%
CHPS zone/ compound	4	1	5	1	0	1	2	0	2	7	1	8	12%
Private not for profit	0	0	0	0	2	2	0	0	0	0	2	2	3%
Professional Grouping *													

Variables	Rural district			Municipality			Sub-metropolis			Total			% of all respondents
	MCH staff	FP staff	Total	**MCH staff**	FP staff	Total	**MCH staff**	FP staff	Total	**MCH staff**	FP staff	Total	
	N=16	N=6	N=22	N=16	N=5	N=21	N=18	N=4	n=22	N=50	N=15	N=65	
Medical Doctor	1	0	1	1	0	1	1	0	1	3	0	3	5%
Medical (Physician) Assistant	1	0	1	1	0	1	1	0	1	3	0	3	5%
Nurse	14	6	20	14	5	19	16	4	20	44	15	59	91%
Do you regularly use any tools as aids in your daily clinical decision-making?													
Yes	16	6	22	16	5	21	16	4	20	48	15	63	97%
No	0	0	0	0	0	0	2	0	2	2	0	2	3%
Which of these do you use to aid your daily clinical decision-making (indicate "Yes"):*													
Printed Protocol/ Guidelines	16	6	22	15	5	20	15	4	19	46	15	61	94%
Charts	16	6	22	14	5	19	13	4	17	43	15	58	89%
Standard Treatment Guidelines	14	3	17	14	3	17	14	2	16	42	8	50	77%
Workshops	16	5	21	15	5	20	13	4	17	44	14	58	89%
Expert advice	16	6	22	14	5	19	13	4	17	43	15	58	89%
Telephone	14	3	17	14	3	17	13	2	15	41	8	49	75%
How often do you use locally modified / developed guidelines**													
Never or rarely	1			0			1			2			4%
Occasionally, frequently or always	12			14			17			43			86%
Non-respondents	3			2			0			5			10%
Do you have access to an official phone at the point of service delivery when you need to call for help in an emergency?													

Variables	**Rural district**			**Municipality**			**Sub-metropolis**			**Total**			% of all respondents
	MCH staff	FP staff	Total	**MCH staff**	FP staff	Total	**MCH staff**	FP staff	Total	**MCH staff**	FP staff	Total	
	N=16	N=6	N=22	N=16	N=5	N=21	N=18	N=4	n=22	N=50	N=15	N=65	
Yes	9	2	11	14	2	16	16	3	19	39	7	46	71%
No	7	4	11	2	3	5	2	1	3	11	8	19	29%
Do you own a mobile phone?													
Yes	16	6	22	16	5	21	18	4	22	50	15	65	100%
No	0	0	0	0	0	0	0	0	0	0	0	0	0%
Are you always able to use your mobile phone to call for help when faced with an emergency?													
Yes	16	6	22	16	2	18	15	4	19	47	12	59	91%
No	0	0	0	0	3	3	3	0	3	3	3	6	9%
Do you use text messaging?													
Yes	12	3	15	13	4	17	13	1	14	38	8	46	71%
No	4	2	6	3	0	3	5	3	8	12	5	17	26%
Non-respondents	0	1	1	0	1	1	0	0	0	0	2	2	3%
If yes, how frequently do you send/receive text messages?													
At least once a day	1	0	1	3	0	3	3	0	3	7	0	7	11%
Several times a week	8	2	10	8	2	10	4	0	4	20	4	24	37%
Occasionally	3	1	4	2	2	4	6	1	7	11	4	15	23%
Have you ever sought advice from a senior colleague/expert outside of your facility when faced with making a critical decision in an emergency?													
Yes	12	5	17	16	5	21	10	4	14	38	14	52	80%
No	4	1	5	0	0	0	8	0	8	12	1	13	20%
Do you have ready access by phone to any obstetrician either within or outside your facility?													
Yes	12	3	15	16	3	19	13	0	13	41	6	47	72%
No	4	3	7	0	2	2	5	4	9	9	9	18	28%

Variables	Rural district			Municipality			Sub-metropolis			Total			% of all respondents
	MCH staff	FP staff	Total	**MCH staff**	FP staff	Total	**MCH staff**	FP staff	Total	**MCH staff**	FP staff	Total	
	N=16	N=6	N=22	N=16	N=5	N=21	N=18	N=4	n=22	N=50	N=15	N=65	
Do you use the internet?*													
Yes	7	2	9	8	2	10	8	0	8	23	4	27	42%
No	9	3	12	8	3	11	10	4	14	27	10	37	57%
Non-respondents	0	1	1	0	0	0	0	0	0	0	1	1	2%
Have you attended any workshop related to reproductive and child health this year?													
Yes	5	3	8	9	5	14	10	0	10	24	8	32	49%
No	11	2	13	7	0	7	8	4	12	26	6	32	49%
Non-respondent	0	1	1	0	0	0	0	0	0	0	1	1	2%
Do you have regular clinical meetings at your department/unit?													
Yes	14	5	19	15	5	20	13	4	17	42	14	56	86%
No	2	0	2	1	0	1	5	0	5	8	0	8	12%
Non-respondents	0	1	1	0	0	0	0	0	0	0	1	1	2%
If yes, how often:*													
Once a week	4	4	8	5	0	5	2	0	2	11	4	15	23%
Twice a month	2	0	2	5	1	6	3	2	5	10	3	13	20%
Once a month	7	1	8	4	4	8	7	2	9	18	7	25	38%
Less than once a month	0	0	0	1	0	1	0	0	0	1	0	1	2%
Thrice in a year	0	0	0	0	0	0	0	0	0	1	0	1	2%
Occasionally	1	0	1	0	0	0	1	0	1	1	0	1	2%
Non-respondents	2	1	3	1	0	1	5	0	5	8	1	9	14%
Do you have any of these guidelines related to MCH with you here today kept at the point of service delivery (question asked only of the 50 MCH													

Variables	**Rural district**			**Municipality**			**Sub-metropolis**			**Total**			% of all respondents
	MCH staff	FP staff	Total	**MCH staff**	FP staff	Total	**MCH staff**	FP staff	Total	**MCH staff**	FP staff	Total	
	N=16	N=6	N=22	N=16	N=5	N=21	N=18	N=4	n=22	N=50	N=15	N=65	
staff)													
Yes, safe motherhood protocol	9			12			12			33			66%
Yes, standard treatment guidelines	15			14			10			39			78%
Yes, others	10			2			0			12			24%
Do you have any of these guidelines related to FP with you here today kept at the point of service delivery (question asked only of the 15 FP staff)													
Yes, family planning protocol		6			4			4			14		93%
Yes, WHO guidelines on FP		4			2			3			9		60%
Yes, eligibility criteria wheel		4			2			3			9		60%
Yes, flipcharts on FP		6			5			4			15		100%
Yes, flip charts on abortion		1			0			2			3		20%

KEY:

- * Sum either greater or less than 100% due to elimination of decimal points.
- ** The family planning clinics in the study did not have any locally modified or developed guidelines.

Table 6.2: Summary of responses to the open ended question: "List three ways in which you believe you can best be assisted to make the right decisions at the point of service delivery when faced with an emergency and uncertain as to what to do".

Category of response	No. responses	% of responses (N=171)	% of staff (N=65)	Examples of responses in this category
Protocols and Guidelines	37	22%	57%	13 out of the 37 responses in the category specifically asked for "printed protocols"; 12 wanted "charts"; most of the rest mentioned specific protocols they wanted; a few just wanted unspecified "guidelines' or "protocols".
Consultation – senior colleague/expert	36	21%	55%	"Access to the supervisor and calling them"; "advice from senior colleagues"; "an experienced midwife can be contacted"; "easy access to phone for calling a senior colleague for help"; "expert advice"
Equipment tools and supplies	26	15%	40%	"Adequate provision of logistics"; "all equipment should be available"; "computers with internet access"; "basic emergency items should be made available e.g. oxygen cylinder"
Provide a telephone/ telephones	15	9%	23%	"Provision of an office phone"; "provision of official phones"; "telephone"
Periodic refresher training	13	8%	20%	"attend regular workshop to upgrade knowledge"; "regular in-service training"; "training programs"; "workshops"
Referral transportation Ambulance	14	8%	22%	"ambulance availability"; "cash to assist clients transportation"; "means of transport for referral"
Other referral related	6	4%	9%	"prompt communication with referral centres"; "quick referral"
Staffing	11	6%	17%	"specialists care"; "specialists availability"; "a need for a doctor"; "more staff"; "doctors should be available and easily approachable"; "there should be an obstetrician on call 24/7"
Peer consultation	7	4%	11%	"advice from colleagues"; "by calling a colleague"
Client participation	2	1%	3%	An inauguration ceremony should be done to make community members aware of the Community Based Health Planning and Services (CHPS) compounds; The Community Health Committee should be inaugurated
Other /unclear how to categorize	4	2%	6%	"call for help"; "career progression"; "effective communication"; "regular facilitative supervision"

DISCUSSION AND CONCLUSIONS

Understanding frontline worker care decision making for maternal and newborn client services is important in developing interventions to support attainment of MDGs 4 and 5. Given that delays within the facility are closely related to decision-making and one of the contributory factors to maternal mortality (Thaddeus & Maine, 1994), it is important to pay more attention to this area. Our findings suggest several potential innovative interventions that could reduce this third delay by supporting and improving care decision making within the health facility.

Two general points arise from our study, concerning any interventions in this area. Firstly, there are multiple issues affecting the decision-making process and they interact rather than work in isolation. Any intervention should therefore be multi-faceted. Secondly, it should also take into account how to work with and around major health system constraints such as staffing inadequacies and referral system challenges.

Several specific ideas for intervening arise out of our observations. Firstly, ensuring near universal availability of up to date evidence based guidelines and protocols is important. The importance of guidelines and protocols is already recognised and in Ghana, where this study was conducted, the Ministry of Health and development partners already spend money each year in printing voluminous protocols and guidelines which eventually find their way into desks and shelves. However, the effective availability of these protocols and guidelines is still inadequate and not all staff in this sample had access to them. Furthermore, there is the need to take a critical look at which form of guidelines will be truly useful to frontline health workers. Our findings suggest that there must be a balance between detailed voluminous reference information as against simple charts and other similar rapid consultation decision-making aids which clearly define management steps in emergencies. Frontline worker responses suggest that whilst appreciating the voluminous guidelines in circulation for reference purposes, more of the quick reference simple charts need to be designed and produced in quantities such that each staff has them readily available.

It is also important to address the infrastructure, tools and supplies constraints of frontline health workers, many of which are very basic. The ability to perform is not only a function of knowledge and information (tools and guidelines) but also of an enabling environment. The referral challenge also stands out. Transportation related delays in the community to reach a skilled attendant are recognised. Our study suggests that even after reaching a skilled attendant, transportation related delays for mothers who need a higher level of care are also an important issue.

We also see a need to more critically explore the potentials of modern information technology, specifically phones and the internet. The near universal ownership and use of mobile phones in the study setting suggests that frontline provider decision-making support interventions that employ mobile phones can be potentially useful. An evaluation of an intervention that used mobile phone text messages as reminders found that it improved the adherence of Kenyan health workers to treatment guidelines (Zurovac et al., 2011). There are

however very few such studies available, and a recent review of the potential to improve maternal health services through the use of mobile phones (Noordam et al., 2011) concluded that robust studies in this area are lacking – making this a clear gap area for future work.

In devising interventions that use telephones, it must be kept in mind that there are costs to communicating by mobile phone. Staff in this study despite their high personal mobile phone ownership expressed a need for “official phones”. The request for “official phones” is so that the cost of communication does not end up being borne by the staff – out of often already too small salaries. Alternatively, where members of staff are being asked to use their personal mobile phones for work related communication; some means must be devised to reimburse them for the cost. Though internet use was lower, it was still being used and it is definitely worth exploring how to harness and effectively use it. This is especially so given that in some cases internet access was part of the list of “equipment, tools and supplies” frontline workers wanted. The advent of smart phones makes a future link between mobile phone ownership and internet access and use in supporting decision making a definite possibility.

The importance of telephones and the internet in clinical decision making is closely related to the need to facilitate communication between frontline providers and peers and experts who can be quickly reached to provide inputs into decision making. Setting up interventions that give frontline staff better access to expert advice is critical, especially in the human resource constrained environments in which the staffs in this study work.

In conclusion, we make a plea that more attention and resources needs to be provided to research, implementation, monitoring and evaluation of effective interventions to support frontline provider decision making and management of mothers and newborns if attainment of MDGs 4 and 5 goals are to be accelerated in sub-Saharan Africa.

Limitations of the study

This study was an essentially qualitative study conducted in one region of Ghana. Its major usefulness is in providing an in-depth understanding of the ‘how’ and ‘why’ of frontline provider decision-making in a particular context. It cannot be assumed to be generalisable beyond the study context. However, given some contextual similarities across Ghana as well as parts of sub-Saharan Africa and other low and middle income countries, it is possible that similar observations will be made if the study is repeated elsewhere.

CHAPTER 7.

Advancing the application of systems thinking in health: Realist evaluation of the Leadership Development Programme for district manager decision-making in Ghana

"The thing is now I am managing a whole facility, meanwhile I have not had any better training on it. I take the little, little training I received from the district to do the management, and whether I am doing the right thing or not, I don't know". (A sub-district facility manager)

ABSTRACT

Although there is widespread agreement that strong district manager decision-making improves health systems, understanding about how the design and implementation of capacity-strengthening interventions work is limited. The Ghana Health Service has adopted the Leadership Development Programme (LDP) as one intervention to support the development of management and leadership within district teams. This paper seeks to address how and why the LDP 'works' when it is introduced into a district health system in Ghana, and whether or not it supports systems thinking in district teams.

We undertook a realist evaluation to investigate the outcomes, contexts, and mechanisms of the intervention. Building on two working hypotheses developed from our earlier work, we developed an explanatory case study of one rural district in the Greater Accra Region of Ghana. Data collection included participant observation, document review, and semi-structured interviews with district managers prior to, during, and after the intervention. Working backwards from an in-depth analysis of the context and observed short- and medium-term outcomes, we drew a causal loop diagram to explain interactions between contexts, outcomes, and mechanisms.

The LDP was a valuable experience for district managers and teams were able to attain short-term outcomes because the novel approach supported teamwork, initiative-building, and improved prioritisation. However, the LDP was not institutionalised in district teams and did not lead to increased systems thinking. This was related to the context of high uncertainty within the district, and hierarchical authority of the system, which triggered the LDP's underlying goal of organisational control.

Consideration of organisational context is important when trying to sustain complex interventions, as it seems to influence the gap between short- and medium-term outcomes. More explicit focus on systems thinking principles that enable district managers to better cope with their contexts may strengthen the institutionalisation of the LDP in the future.

KEYWORDS
Continuous quality improvements; district health systems; realist evaluation; systems thinking

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BACKGROUND

To date, the majority of management and leadership initiatives in low- and middle-income countries (LMICs) have focused on skills acquisition (Curry et al., 2012), with less attention paid to the complexity of the contexts and the health system arrangements which support or hinder such initiatives. In this paper we explore, using realist evaluation methodology, the outcomes, contexts, and mechanisms of a management and leadership initiative introduced into the district health system in the Greater Accra Region of Ghana, and whether or not such an intervention supports systems thinking in district managers. Firstly, we present an extensive background of the decision-making context at district-level. We then delve into several concepts, including systems thinking and continuous quality improvements, before discussing our analytical framework, case study design, results, and conclusions.

District manager decision-making and systems thinking

In district health systems in LMICs, district managers link the national and regional levels – where policies are formulated – to the facility and community levels – where services are delivered. District managers are responsible for providing management and leadership to supervise staff, balance resources, coordinate programmes, and network with local officials and community members, all in a specific time and place. Thus, the manner in which district managers make decisions is important. It has been argued that limited management and leadership capacities at district level contribute to bottlenecks in achieving health outcomes (WHO, 2007b, c, 2009b).

Questions pertaining to management and leadership are some of the most complex in health systems analyses, not least because developing management and leadership requires nurturing myriad individual and organisational capacities (Frenk, 2010). Consequently, interventions that aim to strengthen management and leadership are also complex, and engage with both individual and organisational processes. District managers find themselves navigating complex environments in which district health systems display features of complex adaptive systems, such as self-organisation, path-dependence, emergence, and feedback loops. District health systems evolve over time as a result of multiple interactions between individuals and the system's structure (Begun et al., 2003; Holland, 2006). As an approach to navigating this complexity, systems thinking aims to identify the interrelations between a system's various components (Foster-Fishman et al., 2007). Defined by de Savigny and Adam (2009a) "s*ystems thinking is an approach to problem-solving that views 'problems' as part of a wider, dynamic system*". The authors further identify a cluster of problem-solving skills relevant for systems thinking that distinguishes it from 'usual thinking' paradigms **(Table 7.1)**. Due to their vantage point at the helm of district health systems, systems thinking can usefully support district manager decision-making.

Table 7.1: System thinking skills (*Adapted from Richmond*, *2000* [11]).

From 'usual thinking' approaches…	…to systems thinking
Focused on particular events (*Static thinking*)	Problems framed in terms of a patterns of behaviour over time (*Dynamic thinking*)
Focused on particular details (*Tree-by-tree thinking*)	Focused on understanding the context of relationships (*Forest thinking*)
Focused on factors that influence/correlate with results (*Factors thinking*)	Focused on causality and understanding how behaviour is generated (*Operational thinking*)
System-generated behaviours are driven by external forces (*Systems-as-effect thinking*)	System-generated behaviours are driven by internal actors who interact with system itself (*Systems-as-cause thinking*)
Causality is viewed as uni-directional, without interdependence or interactions between causes (*Straight-line thinking*)	Causality is viewed as ongoing with feedback effects, including interdependence and interactions between causes (*Loop thinking*)

Continuous quality improvements

Continuous quality improvement (CQI) is both a management philosophy and approach. Adopted in American healthcare institutions in the 1980s, the concept spread to LMICs during the 1990s. CQI offers a systematic way of supporting change in management processes towards improving the organisational culture of quality (Spencer, 1994). CQI is based on the assumption that problems within organisations are not rooted clinically or administratively, but are rather systemic and arise out of structural inabilities to perform as intended (McLaughlin & Kaluzny, 1994). McLaughlin and Kaluzny identify nine elements necessary to classify an approach as CQI **(Table 7.2)**. Systems thinking is embedded within this constellation, and can be seen as the glue that binds CQI elements together (the authors refer to this as 'systems-view').

To date, the impact of CQI in sub-Saharan Africa has been mixed. Case studies from three countries have demonstrated several factors that contribute to reduced CQI sustainability and effectiveness (P Blaise & Kegels, 2002). These are: i) introducing quality management as a vertical programme; ii) lacking systemic perspectives and identifying problems in their own sub-systems; iii) oversimplifying decision-making through the use of toolbox techniques; and iv) the conundrum of organisational culture and quality management: does organisational culture change *to* modify practice, or does organisational culture change *by* modifying practice? Furthermore, CQI is always implemented within an organisation's own context – its history, cultural norms, and values. This latter point contributes to understanding the 'inherent duality' of CQI, namely that its principles are based on two

distinct, paradoxical goals: although CQI promotes organisational control, uniformity, and standardisation, it also gives rise to organisational creativity, learning, and cultural change. This means that CQI practice (and the mechanisms behind it) will vary depending on whether its underlying goal is organisational control or organisational learning. Related to this, CQI's underlying goal will be driven, either implicitly or explicitly, by the culture and structure of the organisation itself. Sitkin and colleagues (1994) suggest that the most likely goal is informed by the degree of organisational uncertainty: when uncertainty is high, the organisation is predisposed to learning because control, in a sense, is out of reach. On the other hand, when contextual uncertainty is low, the organisation is predisposed to control because the problem is well understood and can be dealt with mechanistically. CQI has been proposed as a potential solution to improving service delivery in Ghana (Agyepong et al., 2001).

Table 7.2: Elements of continuous quality improvements (*Adapted from McLaughlin and Kaluzny, 1994 [13]*).

Element	Description
Systems-view	Emphasis on analysis of the whole system providing a service, or influencing an outcome
Customer focus	Emphasis on both customer (patient, provider, payer) satisfaction and health outcomes as performance measures
Data-driven analysis	Emphasis on gathering and use of objective data on system operations and system performance
Implementer involvement	Emphasis on involving the owners of all components of the system in seeking a common understanding of its delivery process
Multiple causation	Emphasis on identifying the multiple root causes of a set of system phenomena
Solution identification	Emphasis on seeking a set of solutions that enhance overall system performance though simultaneous improvements in a number of normally independent functions
Process optimisation	Emphasis on optimising a delivery process to meet customer needs regardless of existing precedents, and on implementing the system changes regardless of existing territories and fiefdoms
Continuing improvement	Emphasis on continuing the systems analysis, even when a satisfactory solution to the presenting problem is obtained

Organisational learning	Emphasis on organisational learning so that the capacity of the organisation to generate process improvement and foster personal growth is enhanced

Implementing the Leadership Development Programme in the Greater Accra Region

In Ghana, district managers are staff of the Ghana Health Service (GHS). The context of district manager decision-making is such that resource decisions (human, material, and financial) are constrained. This is partly due to the hierarchical structure of the GHS in which decision-making remains highly centralised, and resources scarce (A. Asante et al., 2006a; Bossert & Beauvais, 2002). District managers have more discretion around programming decisions. Formalised management training is limited, and most managers learn their management roles on the job. Additionally, managers face serious time constraints due to concurrent scheduling of vertical and donor programme activities.

The LDP has been intermittently implemented in Ghana since 2008. Developed by Management Sciences for Health (J. Mansour et al., 2005), the LDP has been implemented in several countries including Egypt (M. Mansour et al., 2010), Kenya (MSH, 2011; Seims et al., 2012), and Mozambique (Perry, 2008); the Greater Accra Region first introduced the LDP in 2010. In 2011, the LDP was proposed as an approach to address limited responsiveness, lacking leadership, and mismatched resources indicated as bottlenecks to improving maternal and newborn (MNH) service delivery (Ghana Ministry of Health et al., 2011b). The LDP is designed for teams to apply 'leading and managing' practices to service delivery problems (referred to as 'challenges' in the LDP – **Table 7.3**). This is realised through teamwork, defining root causes, action planning, monitoring, and evaluation, and repeating the cycle. Its programme theory puts forth that, when deployed in tandem, leading and managing practices improve work climate, management systems, and capacity to respond to change, and ultimately result in better services and health outcomes. However, the programme theory is based on LDP content alone and does not account for differential impacts in various contexts.

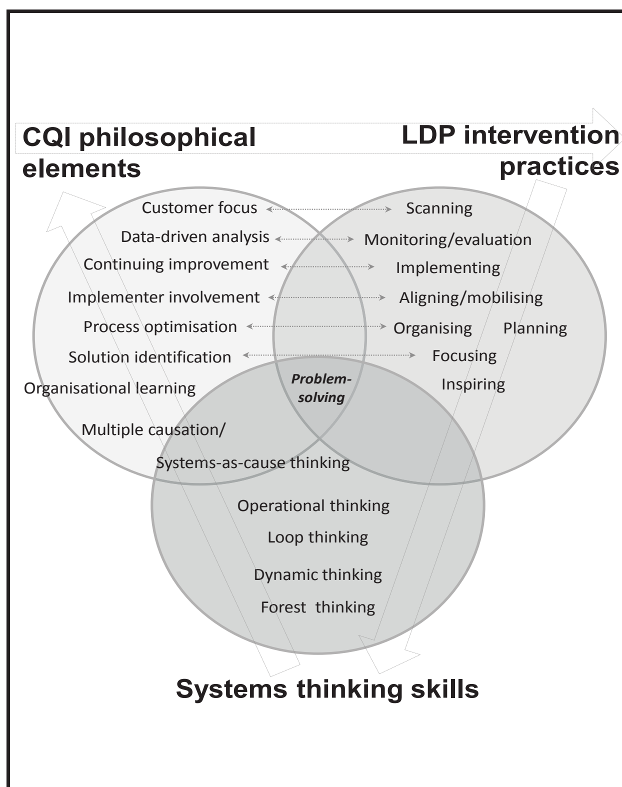
A review of the LDP suggests that it draws upon CQI principles in its approach. The LDP acknowledges the complex environment of managerial decision-making, and states that sustaining advances in health outcomes only occurs when leading and managing practices are absorbed into routine practice (i.e., their institutionalisation). However, the LDP is not explicit about this theoretical basis in CQI, nor does it claim systems thinking as a prime objective. We recognise that CQI philosophy – and implicitly, systems thinking – is embedded within the LDP practice and tools, and we were therefore interested in understanding the degree to which the LDP can stimulate systems thinking in district teams. Though the language differs, the concepts of systems thinking, CQI, and the LDP overlap in their approach to shifting problem-solving towards a more systemic orientation for improved decision-making: if systems thinking is the capacity to see interrelationships between components of a system, CQI is the process of managing these interrelationships,

and the LDP is a practical intervention to implement these principles. This overlap is illustrated in **Figure 7.1**.

Table 7.3: LDP leading and managing practices (*Adapted from Mansour et al*., *2005 [19]*).

Leading practices	
Scanning	Identifying client priorities and needs
	Seeing opportunities, trends, constraints and risks
	(*Organisational outcome*: *valid*, *current knowledge of context*)
Focusing	Developing shared goals
	(*Organisational outcome*: *articulated mission*, *vision*, *strategies and priorities*)
Aligning/mobilising	Building congruence between values, mission, structures and daily actions
	Supporting teamwork
	(*Organisational outcome*: *external and internal stakeholders have ownership over organisational goals and support resource mobilisation towards these goals*)
Inspiring	Building trust and acknowledging team members
	Modelling creativity and learning
	(*Organisational outcome*: *climate of continuous learning with committed staff*)
Managing practices	
Planning	Identifying goals, annual plans and performance objectives
	(*Organisational outcome*: *defined results and matching resources*)
Organising	Ensuring accountability and authority structures
	Aligning staff capacities with planned activities
	(*Organisational outcome*: *functional structures and processes for operations*)
Implementing	Integrating workflows and systems
	Balancing competing demands
	(*Organisational outcome*: *effective*, *efficient and responsive actions*)
Monitoring and evaluation	Reflecting on progress against action plans
	Improving work processes and procedures
	(*Organisational outcome*: *continuous up-to-date data for decision-making*)

Figure 7.1: Overlap in problem-solving approach between systems thinking, CQI and the LDP



The objectives of our study, therefore, are to understand: a) the mechanisms by which a complex intervention introduced into a complex context brings about its observed outcomes (i.e., how and why does the LDP 'work' when it is introduced into a district health system in Ghana); and b) whether or not the LDP increases systems thinking in district managers in this context.

METHODS

Study setting

The LDP was introduced in a rural district, Dangme West. The study took place from November 2011 to August 2013. An initial period of participant observation prior to the onset of the intervention lasted from November 2011 to January 2012. The LDP intervention was implemented from February to August 2012, and a follow-up period of participant observation extended until August 2013.

District managers were defined as: i) members of the district health management team (DHMT); ii) members of the district hospital management team; and iii) members of the three sub-district health teams. These managers were selected because they represent top-level management for decision-making within the district.

Description of the LDP intervention in Dangme West

The LDP was introduced to district teams (district health administration, district hospital, and three sub-district management teams) by a facilitation team consisting of three members of the regional health administration, and one external consultant specialised in the LDP. The curriculum, teaching materials, and learning strategies were based on the LDP Handbook (J. Mansour et al., 2005). The LDP consists of a six-month cycle of root challenge identification, action planning, and monitoring and evaluation. For each training workshop, district teams consisted of 4 to 7 members per team, depending on the size of the facility. These were managers (core management including medical superintendents, district directors of health services, deputy directors of nursing services, physician assistants, and hospital administrators), and staff (accountants, public nursing officers, and midwives). Two-day, face-to-face workshops were held in the capital city Accra three times bi-monthly. These involved modules on LDP practices, developing a shared team vision, diagnosing challenge root causes, developing action plans, setting priorities, mobilising stakeholders to commit resources, monitoring and evaluation, understanding roles in teamwork, and building trust. Workshops were interspersed with monthly coaching visits, with the facilitation team attending teams and their wider staff in their facilities to ensure organisation-wide diffusion of LDP teachings. For their LDP results, each team identified one MNH-related challenge they wished to address (**Table 7.4**). Every team attained their planned results except for one sub-district team; at the time, the health facility did not have a resident midwife and thus faced difficulties in improving its skilled delivery coverage.

Table 7.4: LDP results (short-term outcomes) February to August 2012

Team	LDP challenge	LDP results (short-term outcome)
District Health Administration	Increase skilled delivery from 37% to 40%	Increased skilled delivery to 51%
District Hospital	Reduce still birth from (n=)30 to 20	Reduced still birth to (n=)11
Sub-district 1	Increase skilled delivery from 15% to 18%	Increased skilled delivery to 19%
Sub-district 2	Increase skilled delivery from 1.7% to 5%	Increased skilled delivery to 2.6%
Sub-district 3	Increase focused antenatal care from 0 to 20%	Increased focused antenatal care to 22%

Study design: realist evaluation

We used a case study design as most appropriate for organisational studies in which 'how' or 'why' questions are being asked. Criticisms of case study designs include their weak external validity (Yin, 2014). Seeking to address this criticism through cumulative validation, realist evaluation is an approach capable of addressing complex investigation and probing causal linkages between contexts, actors, and the changes observed. Realist evaluation attempts to move beyond asking 'did the intervention work?' towards understanding 'how did the intervention work, for whom, and in which contexts' (Marchal et al., 2010; Marchal & Kegels, 2008; Pawson & Tilley, 1997; Prashanth et al., 2012)? The case study begins with the formulation of the middle range theory (MRT), based on existing theory and past actor experience. The MRT, structured as a 'context + mechanism → outcome' (CMO) configuration, is validated with actors, and against the literature. The validated MRT then becomes the working hypothesis to be 'tested' in the case. It is subject to revision based on accumulated new evidence.

Analytical framework: our middle range theory

Context of district manager decision-making (C)

The first part of developing our MRT included an in-depth exploration of the decision-making context for district managers in Ghana. Based on our pre-LDP observation period, we found that district managers have narrow decision-space due to the highly-centralised authority within the GHS. National-level control over resources leads to resource uncertainty at district level. Through formal and informal communication channels, district managers engender trust and employ it as a coping mechanism to counter organisational uncertainty and manage the risk of not fulfilling their managerial mandates of oversight, coordination, and networking in the face of resource scarcity. Trust and respect for regional- and national-level authorities further legitimises the system's hierarchy, thereby reinforcing it [unpublished observations]. This decision-making 'loop' is the context into which the LDP was introduced.

Outcomes of the LDP – short- and medium-term (O)

Furthermore, we worked backwards from the observed short-term outcomes of the LDP (i.e., LDP results) and medium-term outcomes, which were interpreted as the residual organisational changes (i.e., LDP institutionalisation). These included new organisational roles and relationships as a result of the LDP, extensiveness (i.e., how widely disseminated across the organisation) and intensiveness (i.e., how deeply integrated into routine practice) of the LDP, and any organisational routines displaced by the LDP (Hawe et al., 2009).

Mechanisms of the LDP (M)

Through our MRT, we attempt to uncover the mechanisms of the LDP. Our beginning assumption was that if systems thinking took place as a result of LDP practices, this would support LDP institutionalisation. In a feedback mechanism, institutionalisation of the LDP would further increase systems thinking. We hypothesised our MRT as follows:

> The LDP brings about its short-term outcomes by encouraging district managers to seek alternative sources of financial and material resources. If

> successful, the increased ability to look within and across the district for resources: i) supports relationship building with district stakeholders, which improves the number and quality of district relationships; ii) expands managerial understanding of the linkages and interactions in the district health system, which deepens systems thinking in managers, and supports LDP institutionalisation; and iii) reduces resource uncertainty, which lessens managerial risk, and thus the need to draw upon trust and respect as coping mechanisms. Reduced resource uncertainty increases district manager decision-space. Reduced uncertainty triggers the LDP's underlying focus on organisational control.

Rival MRT

We also propose a rival MRT where:

> The LDP brings about its short-term outcomes by reinforcing hierarchical authority, because it is introduced in a top-down manner. As such, resource uncertainty remains high, and district manager decision-space narrow. Thus, district managers continue to rely on trust and respect as coping mechanisms to deal with resource uncertainty. The context of high uncertainty triggers the LDP's underlying focus on organisational creativity. This focus on creativity stimulates systems thinking, which supports LDP institutionalisation.

Data collection

Document review

For data on the LDP implementation, we reviewed weekly district management team meeting minutes and monthly regional management team meetings for the duration of the study period, as well as all training workshop materials, team presentations and action plans, and reports from previous LDP cycles in other regions. For overall context, we further reviewed national, regional and district policies, and protocols.

Participant observation

For the duration of the study period, the first author participated in weekly district health management meetings, monthly regional health management team meetings, semi-annual district planning and district review meetings, all LDP training workshops and coaching visits, teams' LDP activities, DHMT supervisory visits to sub-districts, and day-to-day operations of the district. Until October 2012, the third author participated in monthly regional health management team meetings. Continuous discussion with management and staff was the method of sense-making used. As part of their routine management meetings, validation workshops took place at the end of the initial and follow-up observation periods to feedback findings to district teams and integrate their views into the analysis.

Semi-structured interviews

We conducted a total of 23 interviews with members of the DHMT (8), district hospital management (4), and sub-district management (7); 4 managers were lost to staff transfers (2 from the DHMT and 2 at the sub-district level). At the regional level, we interviewed 3 out

of 4 members of the LDP facilitation team, and one development partner supporting the LDP; 17 respondents were women and 6 were men; 3 respondents were in their current posting less than 1 year, 13 between 1–3 years, and 7 between 3–5 years. More than half the respondents (12) had no prior formalised management training.

Interview guides were developed to investigate team perceptions of quality, actual LDP implementation (including challenges and functioning), influence of concurrent district initiatives, organisational sustainment of LDP practices, and changes in relationships and resources. Interviews took place 8 months after the end of the LDP.

Data analysis

Audio-recorded interviews were conducted in English, and observational field notes were converted into transcripts, cleaned, and entered into Atlas.ti© qualitative analysis software. Transcripts were coded against an initial start-code list developed from systems thinking, LDP, CQI concepts, and our MRTs. Emerging themes from the data were also coded. In order to 'configure' our CMOs (Pawson & Manzano-Santaella, 2012), we began with the short-term outcomes. We triangulated across data type and source to systematically arrange our medium-term outcomes and unearth potential mechanisms of the LDP. We then drew out linkages between the contexts, outcomes, and identified mechanisms in a causal loop diagram (CLD).

Ethical considerations

This study was part of a larger study to identify effective ways of improving MNH service delivery, for which ethical approval was awarded by the Ghana Health Service Ethical Review Committee. Teams were made aware of the observation periods. Respondents participated voluntarily, and were able to withdraw at any time. Informed consent was obtained from all respondents, and respondent anonymity was maintained during all parts of the study using coding.

RESULTS

LDP as it was implemented

The LDP was mainly implemented as designed. During implementation, the LDP was frequently discussed as part of management team meetings, and was often mentioned at the monthly regional health management team meetings.

The LDP training approach was more team-based, less didactic, and more intensive than most district workshops. Modules focused more on the deployment of LDP tools and proceeding through LDP processes, and less on facilitating teams to reflect on their own organisational practices or thinking systemically through them. This was indicated in the first LDP workshop, where facilitators identified the programme goals as being: i) to learn how to lead and manage to enable others to face challenges and achieve results; ii) to apply tools to analyse challenges to achieve results; iii) to know how to produce measurable

results; and iv) as managers, to learn how to build a positive work climate. The emphasis was more on the LDP's 'managing' rather than 'leading' practices.

A review of teams' LDP action plans and presentations showed that teams broadly undertook two categories of activities: i) community sensitisation and customer care training for frontline staff, or ii) lobbying local organisations for material resources. From the customer care training workshops we found clear patterns of hierarchy being reinforced. Customer care workshops were facilitated by non-LDP regional staff and were regarded as 'customer care as corporate responsibility, to redeem the corporate image'. In part, this stemmed from some high-profile media cases about staff error. Emphasis was placed on rules and regulations of the GHS, proper comportment of staff in forms of address towards their seniors, and dress codes. Very little related to client-provider relationships and there was minimal opportunity for staff to reflect on their experiences with clients. Furthermore, in performing their root cause analyses, teams were not trained to investigate the interrelationships between different causes, but rather to deal with single root causes separately. Taking the example of poor staff attitude, teams worked through their root cause analysis in the following manner:

> "*Staff attitude is poor, because staff lack courtesy and good customer care; this is because they have inadequate knowledge about good customer care; which is because they have not been trained on good customer care; therefore the solution is to provide customer care training*."

An example of gaps between LDP practice in the context of its implementation and LDP practice in routine work was observed 2 weeks prior to the final LDP workshop. In one sub-district, having been called to assist in a conflict between staff and management, DHMT members resolved the situation by stating:

> "*Any time your leader tells you something, she has a plan. Only one person can lead, others follow faithfully. Yours is to do what you are told. The rest, she will manage*".

Once ended, there was little evidence of teams' efforts to support LDP institutionalisation. None of the five teams engaged in another LDP cycle, no new staff were oriented in the LDP, no funds were set aside for LDP activities, and meeting minutes and staff conversations no longer reflected mention of the LDP. The lack of team efforts towards LDP institutionalisation was influenced to some extent by time constraints of routine district work: at the time the LDP ended (August–September), district teams were focused on completing year-end activities and reporting, and preparing for a new planning cycle. LDP institutionalisation was further compromised by changes of leadership at regional, district, and sub-district levels, which witnessed the appointment of new directors at each level. Critically, the splitting of the district into two separate districts in October 2012 required new administrative structures in the new district, and a restructuring of relationships across both districts. It does not appear that teams used their LDP practices to support these transitions. Several months after the end of the LDP, the majority of team members could

not list the LDP practices. The LDP did not appear to support the development of systems thinking in district managers.

Participant perceptions of the LDP

The introduction of the LDP from the region was unexpected by district teams, and was not initially part of their annual work plan. However, in the context of verticalised programming, this is common. The facilitation of the LDP by the region was perceived in two distinct ways. From the regional perspective, facilitating the LDP provided an opportunity to remind district teams of 'proper conduct', part of which was complying with regional directives. From the district perspective, having regional facilitators participate during coaching visits, heightened the experience:

> "*These big, big, top, top, top, people were here. It's not the normal people like we that they* [*the staff*] *are used to. So that one alone will give them some inspiration…*" (*DHMT member*)

Since the teams had little formalised management training, the novelty of the LDP disposed them to being receptive to capacity support. The exposure to management practices enabled teams to attain their LDP results, and they noted that the imposition of deadlines created a sense of urgency and increased the need to attain results, compared to their routine targets. The LDP also helped managers build initiative. Managers acknowledged that some problems were 'beyond' them, and therefore, initiative-taking was encouraged, but only on a 'small-scale':

> "*You are supposed to make do with what you have. Because sometimes when we have challenges we think that 'oh as for this one, we are waiting for region to come and do it, or we are waiting for national to come and do it'. LDP says you shouldn't think so big, but something within… you should just try to think around yourself*". (*DHMT member*)

Managers learned to better prioritise and felt more able to manage concurrent programmes, and thus viewed themselves as working more efficiently. Supporting teamwork through inspiration and acknowledgment was also important. One manager stated that prior to the LDP she used to ignore her staff if they incorrectly performed a task. Managers did note that the LDP had no influence on the relationship between district and regional levels, nor did it alter the dynamics around resources:

> "*It hasn't changed our resources. If I am saying the truth, I don't think we have the resources to work with*". (*Sub-district head*)

One issue reported consistently by district managers was the LDP's resource intensiveness. Convening stakeholders and running training workshops all require additional funds, which was perceived as burdensome, since teams had severe resource constraints and had not budgeted for the LDP in advance. Lobbying for funds from the District Assembly was difficult as the annual planning cycle had already passed. Furthermore, the time required to

meet for LDP activities, convening the wider team, and preparing plans was viewed as onerous in the face of concurrent programmes and other health system constraints. One manager highlighted the difficulty that under-staffing created in trying to gather staff for training without disrupting service delivery:

> "*The challenges that we had in implementing the LDP were trying to get staff themselves to come around to listen to us. It's terrible, the beginning it was very hard to get the unit heads to come around. The reason was that due to lack of staff. The unit heads must be there to monitor, and there is no staff to bring to come and listen to us.*" (*Hospital management*)

Managers widely perceived the lack of LDP institutionalisation as related to the LDP being a 'regional project':

> "*You can also see that at the regional level it has ended. So if the regional level it has ended can the district continue? Since then there has never been any coach from region to come and see what we have done, where we have reached and what the challenges are. So you can imagine, we at the sub-district, can we also do it? So me, it is not about the district not doing it or it's not implementing it, I only see it as a project…at the* [*LDP workshops*] *we were told it is not a project, it is a running thing. But it has ended as if it is a project and the project has come to an end.*" (*DHMT member*)

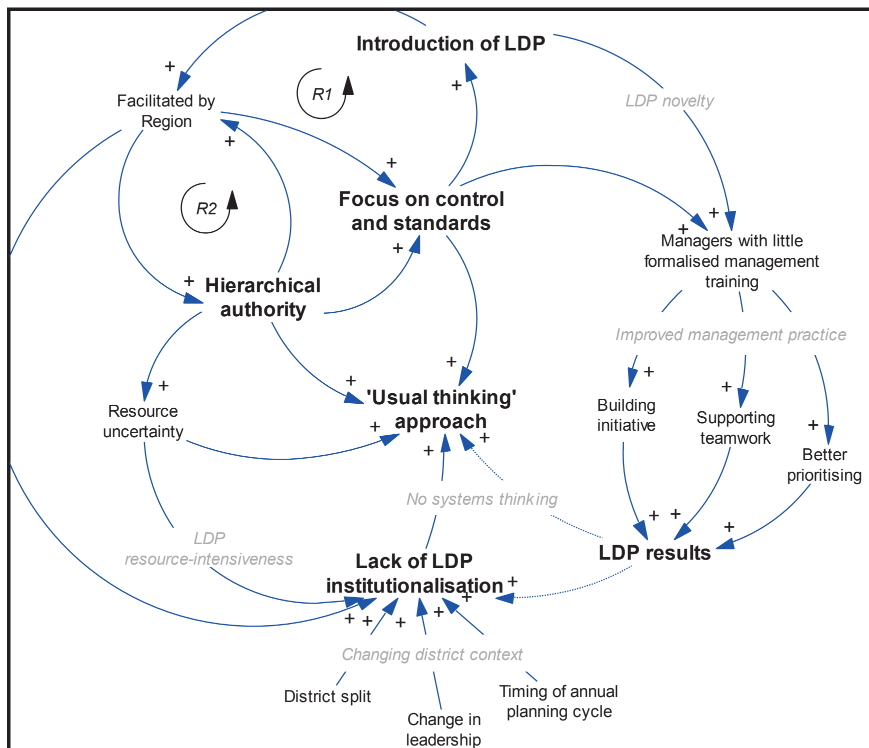
Proposing causal linkages (C + M → O)

We illustrate the relationships between our contexts, mechanisms, and outcomes in a CLD **(Figure 7.2)**. This schema represents causation between variables, with directions of influence depicted by arrows. Influence in the same direction is represented by positive arrows. Feedback loops can reinforce (R) or self-regulate the pathway (Rwashana et al., 2009).

Our CLD shows the pathway of the LDP's short-term outcomes (right-side of the figure, thin arrows) and medium-term outcomes (left-side of the figure, thick arrows). On the short-term, the novelty of the LDP for managers with limited formalised management training (*C*) stimulated the value and utility of bundled management practices taught by the LDP (*M*) for teams to achieve their LDP results (*O*). This causal pathway is linear, and does not significantly deviate from the predicted programme theory of the LDP. On medium-term outcomes, the introduction and facilitation of the LDP in a top-down manner (i.e., from the region) (*C*) promoted hierarchical authority and triggered the LDP's focus on controls and standardisation (*M*). Multiple, reinforcing feedback mechanisms (R1 and R2) neither supported LDP institutionalisation, nor systems thinking among district teams (*O*).

Had our original assumption been borne out, we would see a third reinforcing loop (R3) between systems thinking and LDP institutionalisation. For simplicity sake, we redraw the same analysis as a causal tree diagram (Figure 7.3).

Figure 7.2: Causal loop diagram of LDP implementation, February to August 2012

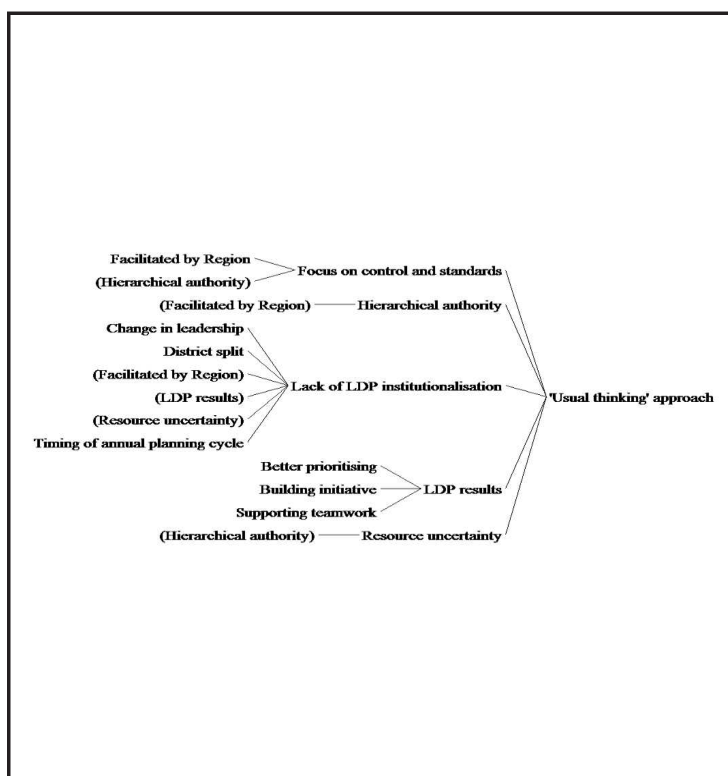


DISCUSSION

Hawe et al. (2009) suggest that the most important dimension of complexity is frequently not the complex intervention itself, but rather the context into which it is introduced. We found that in trying to produce change in a complex adaptive system, the LDP in this case could not be sufficiently institutionalised. In essence, the system 'rejected' it and returned to its prior equilibrium. The context of system hierarchy, as demonstrated by the deployment of regional staff to train the districts, highlights the cascading approach to systems change from the top. This may not always be appropriate, and further underscores the need to think systemically when introducing any intervention. We note that, in this case, the LDP appeared to engage systems thinking in its tools rather than through its practices, and incorporated its CQI elements in its organisational outcomes rather than its processes. This suggests a focus on organisational control, rather than creativity, of both the LDP and the organisational context into which it was introduced. Being tool-driven, the LDP does not itself provide processes for developing a learning organisation, and we noted no evidence of new mental models created in district teams – what Sterman (2006) distinguishes as 'single-loop' versus 'double-loop' learning. Our study raises questions about the nature of management and leadership capacity strengthening. We recognise that short-term capacity

strengthening interventions may not necessarily support such reorientations. As such, it is critical for donor partners and national governments to reconsider the types of idealised interventions often put in place, and how contexts can modulate expected outcomes over time. This suggests support for longer term, more reflective, and potentially unpredictable capacity strengthening approaches. This notion is further supported by a recent study from Rwanda that found no statistical association between training and adherence to recommended MNH practice (Sipsma et al., 2012). Our findings uphold earlier work by Blaise and Kegels (2004), who describe the rigidity and lack of responsiveness in command-and-control structures observed in several African health systems as contributors to quality of care challenges in service delivery.

Figure 7.3: Causal tree diagram of LDP implementation, February to August 2012



At the outset we hypothesised that in reinforcing system hierarchy the LDP's underlying goal of organisational creativity would prevail due to the context of high uncertainty. Paradoxically, the LDP's underlying goal of organisational control was more pronounced. We attribute this to the degree of centralised decision-making in the system: the strength of 'command-and-control' overrides other mechanisms that enable learning, creativity, and adaptability. This mismatch in contextual uncertainty and organisational culture may very well account for the lack of effective management at district level. With this in mind, we refine our MRT as follows:

> The LDP brings about its short-term outcomes through its experience of novelty, building initiative, supporting better prioritisation, and building teamwork. The LDP reinforces hierarchical authority due to being introduced in a top-down manner. As such, resource uncertainty remains high and, as a consequence, district manager decision-space remains narrow. Thus, district managers continue to rely on trust and respect as coping mechanisms to deal with resource uncertainty and their managerial risk. The context of high uncertainty, coupled with reinforced hierarchical authority, triggers the LDP's underlying focus on organisational control. Systems thinking is not stimulated, and LDP institutionalisation does not occur.

In thinking about how the LDP might have been implemented differently, we consider five ways in which the causal pathway could have been altered: i) had the LDP facilitators been peers instead of superiors (for example, training teams could have consisted of district managers whose districts had previously undertaken the LDP rather than being regional officers), this may have weakened hierarchical authority, thereby reducing the top-down nature of its introduction; ii) had districts volunteered to receive the LDP instead of being randomly selected, they may have expected it and better prepared their resources; iii) had ongoing mentorship and coaching been built into the process through systematic follow-up, this may have supported the view of greater district ownership; iv) had the timeframe of the LDP intervention been lengthened to include two or three cycles, this may have had longer-lasting effects and become routine practice; and v) had organisational creativity and learning been an explicit goal, with reflective processes as a major part of the intervention, this may have provided greater opportunity for more systems thinking to develop in district managers. We recommend that the LDP could be strengthened by a more explicit integration of CQI philosophy and principles into its existing tools, and greater attention paid to context to support its institutionalisation. We are aware of existing CQI-based interventions in the Ghanaian health system with similar 'Plan-Do-Study-Act' cycles, indicating that the lack of institutionalisation of one programme does not prevent the implementation of other similar interventions.

Our findings clearly demonstrate that a lack of consideration of the context into which such interventions are introduced can minimise their effectiveness. More importantly, our work highlights the fact that context also informs the kind of management and leadership that emerges at district level. Not uniquely a Ghanaian challenge, decision processes are often rooted in a desire for control and prediction, such that managers who cannot deliver are perceived as ineffective and are soon replaced (Chapman, 2004). These issues exceed the scope of our study, but do underscore the fact that improvements in management and leadership do not reside in the capacities of managers alone, but demand keen attention to the organisational contexts in which managers are embedded.

A limitation of our study is that it reports on only one context for LDP implementation. This is a first level analysis; moving forward we expect to conduct a wider exploration of other districts in the Greater Accra Region and further refine our MRT.

CONCLUSIONS

The influence of contexts on mechanisms in the gap between short- and medium-term outcomes is particularly important given that decisions to scale-up interventions are frequently based on their success in the short term. In the Ghanaian context, introducing the LDP into a context of highly centralised decision-making and resource uncertainty triggered its underlying goal of organisational control. More explicit focus on systems thinking principles that enable district managers to better cope with their contexts may strengthen the institutionalisation of the LDP in the future.

CHAPTER 8.

Discussion and conclusions: Lessons learned for supporting district-level management and leadership in accelerating the unfinished MDGs 4 and 5 agenda

"MDGs 4 and 5, that is maternal and child health? I think in my opinion it comes to access to health care. Access to health care is a very big challenge...we don't have enough health facilities for our communities, so how do you expect those people to come to the facility and deliver? Yes, even there are no vehicles for them to take so we have to take those things into consideration. We shouldn't just condemn that districts are not performing, but we have to look at the access. Where are the people staying, what is their culture? Then the finance: some of them are poor and you ask them to bring their own supplies, things which should be free...

But when you come into the rural areas, if those people here we give them the care, then we can see that a lot of people will be covered and we can improve, because in facilities where even they don't have anything to work with then how can we achieve that? So those things are problems and we have to look at those things". (A sub-district facility manager)

OVERVIEW

As 2015 ends, commentaries accrue regarding how to carry forward the unfinished MDGs 4 and 5 agenda in sub-Saharan Africa. Already, the role of not simply strengthened, but rather transformed and resilient health systems (Kruk et al., 2015), is being featured in those debates. MNH remains a central part of the post-2015 development agenda as the first two targets of Sustainable Development Goal (SDG) 3[3]. In discussing the shift from MDGs to SDGs, it has been recognised that country capacities will be stretched to prioritise and implement the new global goals (Buse & Hawkes, 2015). New operational modes – and the governance arrangements to support them – will be necessary. Recent reports call for 'paradigm shifts' to focus on implementation effectiveness for MNH. These shifts in thinking will be supported by better understanding of strategic policy frameworks, health system dynamics, and implementation performance, all based in contextual understandings (Kendall, 2015; WHO, 2015b).

This thesis contributes to the understanding of management and leadership for MNH by presenting empirical data which implicates a role for the organisation of health systems as critical in giving rise to observed patterns of management and leadership. The introductory chapter outlined the objectives of this research: to deepen understandings of district-level management, leadership and decision-making for policy and programme management and implementation, and the implications for accelerating attainment of MDGs 4 and 5. Additionally, this research sought to understand how management and leadership capacities can be strengthened to better support policy and programme implementation. The starting hypothesis was that at district-level (i.e., the level with oversight for frontline MNH staff), managerial decision-making in interpreting, translating and supporting implementation of national-level policies and programmes will have some influence on MNH service delivery. This research followed a realist approach to provide some answers to the original questions:

1. How and why do district managers make decisions with regard to implementing MNH policies and programmes?
2. Does the Leadership Development Programme (LDP), many of whose principles are implicitly based on continuous quality improvement, lead to strengthening district management, leadership and improved decision-making? Why or why not?
3. What lessons can be learned regarding design and implementation of interventions to support decision-making for desired outcomes in MNH?

Chapter 1 provided the rationale and justification for this study. Chapter 2 followed with theoretical and methodological considerations, laying out the study's conceptual foundations and approach of using realist methodology. Chapters 3-6 addressed findings related to the first research question. Chapter 3 began by exploring (using qualitative

[3] Sustainable Development Goal 3 is to *"Ensure healthy lives and promote well-being for all at all ages"*. Target 3.1 is: "*by 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births"*; target 3.1 is: *"by 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births"*. www.sustainabledevelopment.un.org

methods) what informs district manager decision-space in-depth. This was further validated in Chapter 4 using mixed qualitative-quantitative methods. Both chapters demonstrated that an organisational context of high resource uncertainty (both human and financial) and strong hierarchical authority limits district managerial decision-space for both resource decisions and (to a lesser degree) local planning, programming and management. This orients management and leadership towards serving the bureaucratic function of the system, and impedes managerial capacities for responsive management to arising MNH challenges. The predominance of top-down decision-making within the health system manifests an overall organisational goal of control, which suppresses a leadership of creativity, innovation and learning at district-level. Such mismatches in managerial scope appear to affect MNH service delivery. In Chapter 5, a look at the evolution of the district health system within the context of Ghana's overall decentralisation processes revealed a centralising tendency within government broadly – and a creeping verticalisation and fragmentation within the health sector specifically. This has limited the certainty of financial resource control and availability at district-level. It has also eroded district manager decision-space over time. Chapter 6 linked the policy context of district manager decision-making to the practice context of frontline staff conditions which managers oversee. This chapter presented a challenging mix of inadequate material resources, referral difficulties, and frequent unavailability of protocols to support provider clinical decision-making.

Chapter 7 addressed findings related to the second research question. Given the implicit focus on organisational control, as demonstrated from the preceding chapters, the LDP, when introduced into this context, did not prove sustainable. The LDP did not yield any residual organisational change either. As a result, the LDP did not improve management and leadership decision-making. This was related to the context of control which blocked the intervention's mechanisms to develop systems thinking, creative and adaptive problem-solving in managers.

This final chapter discusses the lessons learned regarding interventions to support district manager decision-making. These lessons fall into two broad categories. The first set of lessons relate to how, in practice, management and leadership for MNH can be strengthened in the SDG era. The second set of lessons relate to the learnings of applying realist evaluation methodology to such research questions.

LESSONS ON HOW TO STRENGTHEN MANAGEMENT AND LEADERSHIP FOR MNH IN THE SDG ERA: ADDRESSING DISTRICT HEALTH SYSTEM GOVERNANCE

The novelty and innovation of this thesis is in its application of complexity theory to understanding governance issues. Applying a complex adaptive systems lens to the issue of district health governance in this research demonstrated how features of complexity (e.g. emergence, path-dependence and self-organisation) can be observed in decision-making in reality. This research sought to explain some of the gaps in MNH policy and programme implementation from a broader perspective of health system organisation. This yielded a deeper understanding of systemic interactions and patterns than would have been possible

otherwise. The findings suggest that the organisational structures in which district managers are embedded require rethinking to enable more effective management and leadership of MNH service delivery. Management and leadership competencies are usually blamed for being weak, and the site of bottlenecks (Filerman, 2003; WHO, 2007b, c). This thesis presents evidence to show that it is not only individual competencies, but that observed management and leadership patterns are integrally linked to the overall organisational system, driven in this case by the higher-level structures under which managers find themselves. This results in district-level inefficiencies and system fragmentation which contributes to sub-optimal MNH outcomes. The findings herein point to persistent and intransigent problems which have been recognised before. Challenges of limited policy ownership, minimal control over needed resources, too-strong vertical allegiances, lack of comprehensive district planning and tendencies towards health sector verticalisation and fragmentation have persisted for some time (Agyepong, 1999; Crosby, 1996; Ghana Ministry of Health, 2011). These are fundamental issues of district health system governance.

The literature on governance in health is primarily normative. Recent systematic review evidence notes that "good" governance mechanisms linked to improved health outcomes include responsive health system decentralisation, transparent and participatory health policy-making, increased community engagement and increased social capital (Ciccone et al., 2014). However, this relates to an 'ideal' of governance without giving any contextualised indication of what is occurring in a system in reality, or how that system can move towards the ideal. In contrast, Olivier de Sardan refers to 'real governance' – that is, the everyday operation which is practiced. 'Real governance' has multiple modes: its dynamics can converge or contradict at different times and for different reasons. Importantly, 'real governance' is still poorly understood, especially in service delivery (Olivier de Sardan, 2008). Its usefulness is in 'real' outcomes, and therefore being able to design 'real' interventions to address them. Returning to Brinkerhoff and Bossert's definition of governance, the findings of this study encourage rethinking the distribution of roles and responsibilities within the Ghanaian health system which shape relational interactions. Because authority, power and decision-making within MNH service organisation, as software inputs, are necessary to understanding management and leadership strengthening, moving from addressing 'ideal' to 'real' governance will be imperative in the SDG era.

LESSON ONE: STRENGTHENING MANAGEMENT AND LEADERSHIP FOR MNH THROUGH IMPROVED ORGANISATIONAL CAPACITIES

How can district-level managerial and leadership capacities be strengthened to become more responsive to MNH challenges? From the study findings, increasing the adaptive function of the health system might be one way of supporting this. But what is the scope for systemic change? It has been previously noted that sustainable, transformational change in health systems requires action at all levels, including strategic, administrative, procedural and motivational (Greenhalgh et al., 2009; Pawson et al., 2014). This indicates levels of change which span both the individual and the system. It also implies that systemic change must be a concerted approach across these levels. A redistribution of decision-space

capacities is required. As such, capacity strengthening in this light would be very different from the current models of capacity strengthening which dominate in health system strengthening (i.e., training). Understanding what the organisational capacities are for shifting the locus of decision-making from national and regional levels to the district, and how they can be addressed is critical in understanding how capacities at the organisational level can be better strengthened. This is important, because as our findings demonstrate, building up individual capacities through training models only, and sending those individuals back into contexts which are resistant or insusceptible to newly-learned skills limits effectiveness. In other words, any future intervention seeking to improve district-level managerial and leadership capacities would encompass broader changes simultaneously with individual-based skills acquisition. By focusing on the relational systemic interactions greater creativity and responsiveness could be released into the system.

Blaauw and colleagues (2003) summarise it like this:

> "*Health sector reform that seriously addressed the 'software' of health systems would differ significantly, in both content and process, from current initiatives. It would focus on priorities such as developing shared goals, promoting organisational values, creating supportive work environments, influencing informal social networks, building trust, and improving organisational learning. These initiatives will probably require new types of bureaucratic organisation and depend on more participative and transformative approaches to management and leadership*".

This thesis adds to a growing body of evidence on the limitations of district-level authority, procedural approaches to work, general directive compliance, and a lack of systems thinking within district management (Gilson et al., 2014a; Scott et al., 2014). The findings underline a deep need for radical approaches to reform which run counter to existing models.

LESSON TWO: STRENGTHENING MANAGEMENT AND LEADERSHIP FOR MNH FROM THE DISTRICT

Policy implementation is necessarily technical and political, but it is also managerial – that is, it is an organisational process that must be managed – and this is rarely acknowledged. Policy implementation has hitherto been assumed to occur in closed systems, "*where inputs and outputs are under direct control of first the decision-maker and then the implementer*" (Crosby, 1996). This transmits a view of policy implementation as linear, in policy cycle (formulation to implementation), and policy level (national to subnational). Yet, as this thesis shows, policy implementation is subject to complex adaptive system dynamics. Most government policy-making, however, still favours linear thinking models (Andrews, 2013). Such 'policy capacity' (defined as "*the sum of competencies, resources and experiences that governments and public agencies use to identify, formulate, implement, and evaluate solutions to public problems*") (Forest et al., 2015) needs to be expanded. Chapman (2004) points to four presumptions of policy implementation which reinforce linear cultures of (national-level) government. These are: 1) prejudices of 'knowing best'; 2) fears of failure; 3) biases towards uniformity and

standards; and 4) lack of time. Moreover, attitudes towards district managers as mere coordinators or administrators has conferred upon them a "*lowly status*" (Bach, 2001), thereby maintaining their exclusion from strategic-level power decisions.

This study's findings recommend systems change which can shift the locus of decision-making from national and regional levels to the district. Specifically, this would entail nudging the system from one which engenders administrative management and leadership, to a system which encourages adaptive management and leadership. This would mean moving away from authoritative, hierarchical health system organisation, towards system organisation which allows for bottom-up, generative creativity and learning. In light of strengthening management and leadership for improved MNH, what might hinder such transformational systems change? One major hindrance is the orientation of the global MNH agenda itself, and its effect on MNH accountability. In the case of accountability for MNH, the focus remains on accountability as data-tracking and routine monitoring. For instance the recent WHO report on ending preventable maternal mortality accentuates accountability of health systems, in particular the ability "*to track and measure progress...and routinely report[ing] on it*" (WHO, 2015b). However, other reports demonstrate that data requirements as part of accountability monitoring, reviewing and action stay top-down, burdensome and often irrelevant for local actors (Global Health Visions, 2015; WHO, 2015a). The bulk of accountability mechanisms which come from the global agenda provide commitment frameworks for national-level governments, yet these commitments are frequently unknown below national level. Collins and Green (1994) have referred to strategic and management planning which is based in internationally-driven power structures as "*PHC-destructive*"; this is because they promote the dominance of higher levels of government (Hsu et al., 2012; Natuzzi & Novotny, 2014; Peters & Chao, 1998). While they may not sufficiently address community needs or country priorities (Global Health Visions, 2015), they are furthermore blind to the governance arrangements (or 'real governance') in-country which can support or hinder 'real' accountability. Moreover, many of the global accountability mechanisms are themselves unclear and need greater downward orientation. It is of significance that the evidence on the Paris Declaration principles on aid effectiveness has shown that while these principles can enhance aid management and delivery, they are less convincing on yielding "*sustained reform in policy-making and governance*" or even service-level improvements (Stern et al., 2008). This implies that other principles to guide sustainable country-level policy and governance reforms are needed.

The discussion of shifting paradigms comes at a time when debates on decentralisation within Ghana are being reignited. Yet reorienting the shift to a fully devolved district health system is a significant undertaking. The National Decentralisation Action Plan (Ghana Ministry of Local Government and Rural Development, 2003) identifies several areas which will require focus in this endeavour. They include strengthening political leadership at all governmental levels for decentralisation; enhancing policy management for decentralisation; strengthening the governance function of district assemblies; strengthening district financial resource generation and management (including an operational composite budget system); and strengthening devolved human resource management. The Decentralisation Policy Review (Joint Government of Ghana & Development Partners, 2007) further points to the

constitutional and parliamentary amendments required to formally enact transfer of powers and resources. The Draft Decentralisation Policy Framework acknowledges that further conceptualisation on operationalising the accountability relationships is required (Ghana Ministry of Local Government and Rural Development, 2010). The findings of this thesis also point to the influence of broader macro-developments, including decentralisation processes and district financing on district managerial leadership and decision-making. This means that systemic interventions which allow for flexibility, adaptability and learning will be necessary to strengthen district management and leadership. In practical terms this will necessitate delegating control of financial resources down to the district-level, and addressing accountability mechanisms. In any future MNH agenda, these will be important elements.

LESSONS ON THE SUFFICIENCY OF REALIST EVALUATION METHODOLOGY TO ANSWER SUCH RESEARCH QUESTIONS

Policies and programmes (i.e., interventions) work by introducing new ideas and resources into an existing set of social relationships. Realist evaluation approaches seek to investigate the extent to which these pre-existing structures enable or disable the intervention's mechanism (i.e., its programme theory or theory of change) (Pawson & Tilley, 1997). This section reflects on the utility, challenges and limitations of such a methodological approach in examining the conditions which bring about, in this case, the decision-making of district managers as it relates to MNH, and the capacity for the LDP to improve decision-making.

Did a realist evaluation approach help to answer the original research questions? The study objectives were underpinned by the following concerns: how does district manager decision-making function to create favourable conditions to support achievement of MDGs 4 and 5 (or not); and how can management and leadership capacities be strengthened to better support policy and programme implementation? The study sought to explain the balance of top-down versus bottom-up power dynamics influencing policy implementation and district health system management and leadership. These are fundamentally about people and processes. While acknowledging that the future is unknowable in a complex adaptive system (due to emergent and non-linear interactions), the use of a realist approach – as a way of explaining – further acknowledges the fallibility of knowledge claims, and the need for revision based on new evidence and deepened understandings. This section discusses the learning points of such an approach in terms of its usefulness, challenges and limitations.

LESSON THREE: UTILITY OF A CONTEXTUAL FOCUS IN STRENGTHENING MANAGEMENT AND LEADERSHIP CAPACITIES

Realist evaluation approaches engage explicitly with contextual investigation to offer a causal explanation about intervention-induced change. This made its use in this study critical to unpacking the phenomenon of district manager decision-making. A realist evaluation approach enabled a deliberate study of the context of managerial decision-making to explain how and why the LDP brings about its observed outcomes when introduced into such a context. In answering the first research question, the study findings suggest that a context of predominant top-down policy development and resource uncertainty (in particular, a lack of transparency around financial resources) drives emergent management and leadership patterns to be more attendant to health system bureaucracy. This in turn makes management and leadership less responsive to arising district-level challenges. To the question of whether the LDP leads to strengthened district management and leadership and improved decision-making, the study findings suggest that the pre-existing context of hierarchy promoted a mechanism of organisational control inherent to the LDP. This diffused the newly-learned management and leadership practices, further reinforced the prevailing typology of administrative management and leadership and ultimately rendered the LDP non-sustainable. It was the systematic linking of context to district manager decision-making in this case which enabled the construction of plausible explanations to answer the research questions.

Context is sensitive to historical developments. As such historical perspectives to some degree are required in realist investigations (Connelly, 2007; Pettigrew, 1997). Thus, no given intervention is ever introduced into the same complex adaptive system twice. While we did not systematically compare the two interventions, the experiences of the LDP and SDHS into the Ghanaian district health system provide interesting illustrations of different systemic responses to similar management and leadership capacity strengthening interventions. Essentially, the LDP and SDHS are variations on CQI-based problem-solving. There are, however, important differences between the two. For instance, while the SDHS problem-cycles were repeated multiple times over an 18-month period, the LDP was implemented once over 6 months. Whereas the SDHS simultaneously engaged national, regional and district-level, the LDP followed a cascaded approach from national to regional to district-level. The SDHS was an explicit part of a bottom-up system development initiated from district medical officer leadership and ownership (despite being a WHO-funded pilot). Its focus was on district management as confidence-building. This supported its adaptive learning function. In contrast, the LDP was introduced and implemented in a top-down manner from national-level (funded by USAID) which reinforced systemic hierarchy. Finally, while the SDHS was introduced during a more formative period of the district health system, when the district health system itself was emerging and maturing, the LDP was introduced when the district health system had been established, formalised and matured in its structures.

Cumulatively, this work points to the significance of context-dependence of intervention success, as well as the temporal-specificity of context. When district management and

leadership are regarded in context, the relational interactions between management actors and the organisational structures which bind them can be better understood. In particular, the investigation of context in this case provided a key learning, that context can have a differentiating effect on a given intervention over time. This was observed in the gap between the LDP's short-term and medium-term outcomes. While the LDP proved successful and even over-achieved its targets in the short-term, there was no evidence of residual organisational change as a result of the LDP in the medium-term. This is significant for two main reasons. First, decisions to scale-up interventions are regularly made based on the results of short-term outcomes. It is rare that a government will wait for an intervention to 'settle' into a context before evaluating its effectiveness. This means that for true intervention impact to be understood, time horizons have to be lengthened to see how the intervention matures by contextual enablers or disablers over time. Secondly, while the bulk of interventions are imported into low- and middle-income country contexts from international programmes, they may already have programme theories, however these theories are most often context-neutral. This explains the reason why a programme such as the LDP can have several positive impact assessments conducted in various countries (M. Mansour et al., 2010; Perry, 2008; Seims et al., 2012) yet fail to be institutionalised elsewhere. The implication is that programme theories of change, without context, are only theories. This point raises an additional issue: when interventions originate with international programmes, who controls the intervention, and how does this influence the theorising about it? Furthermore, does the external introduction (i.e., top-down) of such interventions reinforce hierarchy through the control of financial resources and ideas?

LESSON FOUR: CONCEPTUAL CHALLENGES OF MULTI-LEVEL THEORISING

Chen and Rossi refer to the heavy conceptual requirement of theory-driven evaluations (1989). This was also a challenge in this research, and was further compounded by having few examples to draw on of realist approaches in LMIC health systems, especially related to district management. Thankfully this is changing, and key exceptions include the work of Marchal and colleagues (Marchal et al., 2010; Marchal & Kegels, 2008), and Prashanth and colleagues (Prashanth et al., 2014; Prashanth et al., 2012). Any realist evaluation approach will always be 'incomplete' due to the inherent multi-causality of an intervention into a complex system. This means that some causes and their related pathways will remain unseen. Additionally, given the fact that the MRT can be continually revised, there is a sense that 'work is never over' – the investigation can be endless. The need to continuously re-conceptualise realist work is time-intensive. The resulting aim, according to Marchal and colleagues (2010), is to be pragmatic in attitude, approaching the resulting MRT as a policy or practice tool to inform action. A review of the application of realist evaluation approaches within health systems research identifies methodological challenges related to unravelling context, intervention and mechanism (and their boundaries) to develop and revise the MRT (Marchal et al., 2012).

This study had to theorise at two levels: at the level of the *context* for district manager decision-making, and at the level of the *intervention*. Westhorp has referred to this

conceptualising work as the "levels, layers and ladders" of applying realist approaches in large-scale, complex interventions (Realism Leeds Conference, 2015). It requires adeptness at moving up and down levels of abstraction and levels of the system, and developing theory to explain what is happening at each level. In this research this amounted to 'unwinding' the double helix of theory-ladders to try and separate out the context MRT from the LDP MRT. This was challenging. The investigation was further challenged by the fact that the intervention was not within the control of the ACCELERATE project. As described in Chapter 2, while the initial plan was for the ACCELERATE project to develop a CQI-based intervention to improve management and leadership decision-making, the project rather responded to what was being implemented within the health system, that is, the LDP. This natural development was suitable since the study was interested in assessing what was presently occurring within the Ghana Health Service. Subsequently, the fact that the LDP was not sustained presented challenges to the investigation, in that cumulating evidence through repeated intervention cycles in realist evaluation is designed to shed light on the dynamics related to the intervention. Without the continuation of any intervention in this case, the validation phase turned to further in-depth study of the context to develop more understanding of what types of future intervention may lead to greater system transformation.

LIMITATIONS OF THE THESIS

There are some limitations to the study. Three are noted here. The first relates to the fact that as actors in complex adaptive systems, district managers (and staff) also shape the context, and so an understanding of their internal motivations would add understanding to the complex dynamics of the system (Agyepong et al., 2004). Another limitation of the study, given the emphasis on organisational hierarchy, is the relationships between district management and their subordinates. The study focused mainly on the interactions between district managements and their senior leaders (i.e., regional management) because this is what emerged most strongly from the data. However, it would be useful to also understand how the interactions between district managers and their staff are also inputs into managerial decision-making and policy implementation. Finally, the absence of any significant gender analysis in managerial decision-making is a limitation given the predominance of women managers at the district-level (which is notably more than at higher system levels). While the literature on gender and health systems, especially human resources for health and service delivery, tends to focus on frontline nursing or community health work (George, 2007; Standing, 1999), it remains silent on issues of gendered management and leadership, especially in sub-Saharan Africa. This is a major gap. These are all important pieces of better understanding the puzzle of district-level governance. While one study cannot possibly investigate every perspective, these three in particular merit further research.

This thesis paints a multi-layered and complex portrait of district-level management and leadership decision-making for MNH policy and programme implementation. There will always be tensions between organisational control and creativity. It is within these interactions that patterns of management and leadership will arise: "*Whether management and leadership tend towards bureaucratic controls or enabling creativity will stem from here. So while it is widely acknowledged that management and leadership style give rise to organisational culture, it should also be understood that organisational cultures and structures give rise to management and leadership capacities*" (Kwamie, 2015). The resulting mismatch in managerial decision-making scope, in its current configuration, remains problematic for accelerating the achievement MDGs 4 and 5. However, the reality is even more complex than what is contained in this work. Despite constraining and at-times frustrating conditions of work, district managers remain committed and hardworking in organising MNH service delivery, stewarding the minimal resources at their disposal, and leading their staff, all towards a deep-seated desire to achieve performance targets. With minimal training in advance, district managers maintain cordial, respectful relationships with their regional managers, and support their subordinates as much as they can. Rather than amplifying the potential pessimism of the current state of district-level governance, this research seeks to advocate for health system development and reform to empower district managers, and thereby accelerate the improvement of MNH outcomes. Optimism should prevail to see opportunities for systemic progression to maximise the continued implementation and operationalisation of MNH policies and programmes. Having engaged with managers in this realist approach, it does present opportunities for future work beyond research, towards supporting ways of developing realist management practice (Connelly, 2000). That is to say, insights from this research can be developed towards guiding more reflective practice for managers – this can support a more bottom-up orientation towards management and leadership decision-making, thereby nudging the system towards greater adaptive, learning and creative leadership.

COMMENTARY.

Balancing management and leadership in complex health systems

Comment on "Management matters: A leverage point for health systems strengthening in global health"

"You see, that's what leadership is about. A leader must be able to take very difficult decisions but must be able to support his decision and defend that stand. You see, when you take a decision, you must be sure that you have all the facts and that nobody can shoot that decision down.

But I have found out that [we] are afraid of taking decisions that is why we have what we have now. And you see, there are some decisions when you take you step on some toes, but you will not be stepping on every toe. But you must be aware. If it's for the general good, then stepping on one or two toes is even better. But as I said, when you take a decision, you must defend that decision until you are proven wrong – and when you are proven wrong be magnanimous to accept that, yes, in the light of new evidence, I agree that I made a mistake and change the situation and go on. That's what good leader should do. And that's what we are not doing" (Former deputy Minister of Health).

ABSTRACT

Health systems, particularly those in low- and middle-income countries, need stronger management and leadership capacities. Management and leadership are not synonymous, yet should be considered together as there can be too much of one and not enough of the other. In complex adaptive health systems, the multiple interactions and relationships between people and elements of the system mean that management and leadership, so often treated as domains of the individual, are additionally systemic phenomena, emerging from these relational interactions. This brief commentary notes some significant implications for how we can support capacity strengthening interventions for complex management and leadership. These would necessarily move away from competency-based models focused on training for individuals, and would rather encompass longer-term initiatives explicitly focused on systemic goals of accountability, innovation and learning.

KEYWORDS
Management; leadership; complexity; health systems

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John Kotter, the American business thought-leader, has famously pointed out that most organisations are *"over-managed and under-led"* (2001). This is a statement pointing to many things. First, it indicates the interrelation, yet distinction between management and leadership, that there can be too much of one, and not enough of the other. Secondly, it speaks to the fact that within these elements of organisational steering, organisations have classically been guided more by management, perhaps to the detriment of leadership. Third, it subtly suggests that management, in its abundance, may be an easier thing – to see, to accept, to correct – than leadership.

The mandate given to those in management positions is frequently on stewarding operational inputs, and less on creating enabling environments to support systems change. Meanwhile, leadership is considered to be the remit of those at the strategic peak of the organisation. The World Health Organisation combines the elements of inputs and inspiration to define good management and leadership as: *"providing direction to, and gaining commitment from partners and staff, facilitating change and achieving better health services through efficient, creative and responsible deployment of people and other health resources"* (WHO, 2005). In the context of increased global focus on health systems strengthening, Bradley and colleagues recently noted the need for renewed focus on management as a critical way of making progress on pressing health challenges (2015). This author agrees with them that *"despite a renewed focus on strengthening health systems, inadequate attention has been directed to a key ingredient of high performing health systems: management"*. Indeed health management and its related competencies come with a technical edge, requiring abilities to link inputs to performance, control budgets, and harness resources. Yet in complex adaptive health systems, managing and leading people is a critical but often little understood dimension. Complexity theory explains that complex systems have a non-predeterminable nature and are defined by holistic, non-linear, emergent feedback interactions between components of the system. This means that input-output models of management risk overlooking the systemic interactions which in fact *give rise* to what we call management and leadership. As this journal has now featured editorials on management (Bradley et al., 2015), health policy and management (Chinitz & Rodwin, 2014), and leadership (McDonald, 2014) as distinct elements of health system strengthening, this commentary presents an opportune moment to underscore their continuity: management without leadership is "dead works"; given the interactive nature of these complex phenomena, the two must be considered together. This commentary builds on Bradley and colleagues' arguments, and offers added depth by considering issues of management and leadership through the lens of complex systems.

The art and science of people-centred management and leadership, especially in low and middle income country health systems, has lagged behind (Sheikh et al., 2014). Much of the focus on management and leadership has been informed by bureaucratic forms of governance (Olivier de Sardan, 2013) in country health systems – that is, forms of decision-making which emphasise hierarchy, alignment and centralised planning and thinking. Often, pyramidal structures with power accrued at the top have meant that leadership has been associated with position, and management derived from efficiency models. However, such approaches have not sufficiently accounted for the unpredictability of human action which results in systems emergence and novelty (Stacey et al., 2000). When we view

management and leadership through the prism of complexity, it moves us towards understanding that management and leadership are beyond individual competencies and attributes solely, and are in fact systemic phenomena (Osborn et al., 2002). This is because management and leadership are interactive and context-specific, and as such are influenced by more than what emerges from an individual alone (whether innate or trained), to include what emerges from the interactions between individuals, and between individuals and the organisational contexts they are embedded in. This also means that the discrete meanings of management and leadership in a given system, and more importantly their role (i.e., what are management and leadership for; what are they doing in this system?), will be determined by these relational interactions: whether management and leadership tend towards bureaucratic controls or enabling creativity will stem from here. So while it is widely acknowledged that management and leadership style give rise to organisational culture, it should also be understood that organisational cultures and structures give rise to management and leadership capacities. This is especially true at subnational levels where middle managers must operationalise policies through particular strategic frameworks (Kwamie et al., 2015a).

Wide-ranging perceptions of managerial weakness and lacking leadership have been recurrent themes in analyses of poor performance and low achievement of health outcomes (WHO, 2007c). Yet organisational cultures and structures greatly determine the degree of managerial influence which manifests throughout the health system, and this is little commented upon. Challenges of top-down planning as a *"a blunt instrument of control"* (Currie, 1999) limit managerial responsiveness and suppress a leadership of creativity, innovation and learning. Elsewhere, it has been noted that stagnation within health systems can be attributed to the inability to learn in order to support systemic responsiveness (Swanson et al., 2015). What is more, these challenges are not new, and appear in both high- and low-resource settings, as cases from the United Kingdom (Rouleau & Balogun, 2011) and Niger, Zimbabwe and Guinea (P Blaise & Kegels, 2002) demonstrate. The main difficulty with such bureaucratic orientations, especially in resource-constrained settings, is that they result in mismatches in managerial accountability, that is, the degree to which managerial authority can be made answerable for achieving agreed-to performance targets (Newell & Bellour, 2002). Middle managers are regularly tasked with mandates within organisational contexts of uncertainty, which in turn limit decision-spaces, and make these mandates very hard to meet. This *rhetoric of accountability* – the distance between managerial responsibility and scope for autonomy – begs the question of whether in fact health system middle managers are often being held accountable for health system performance unfairly. The thinness of literature on health system bureaucratic accountability – an important oversight given the need for middle managers to balance upwards and downwards systemic power – points to the need for further study (Cleary et al., 2013).

How can health managers be sufficiently empowered, from a complex systems perspective, to better enact their managerial roles, their leadership capacities and release greater creativity into the system to improve health performance? It is important to note that traditional strategic management approaches don't sufficiently reduce organisational uncertainty or complexity. Furthermore, strategic management is most often packaged only

at the strategic formulation stage, not significantly enough on strategic thinking, nor strategic implementation, and therefore remains limited to national-level leadership (Kiggundu, 1996). The implications of understanding management and leadership in a complex adaptive health system as an emergent property of relational interactions would begin with considering management and leadership capacities as a systems phenomenon (Ortiz Aragon & Giles Macedo, 2010). Because the bulk of capacity strengthening approaches to date have not understood the adaptive, creative and emergent character of complex systems, they have tended to remain based on cause-and-effect, technical transfer change models (Ortiz Aragon, 2010). As a systemic trait, this would make individual, competency-based trainings, currently the norm, insufficient, as systems in essence cannot be trained. Keeping in mind that the interactions within a complex system give rise to its character, capacity strengthening would then become about strengthening the organisational relationships that engender innovation and resilience (Woodhill, 2010), not simply diffuse new skills. A complexity perspective on management and leadership also has the added effect of erasing the linear flow of hierarchy, and with it the notion that leadership happens at the top-level, and management somewhere thereafter; it allows management and leadership to emerge from anywhere in the system. However, the character of such management and leadership will be determined by the interactions and relationships within the system. In maintaining the balance between individual and organisational capacity strengthening approaches, the two should be considered complementarily, not mutually-exclusive.

Next, how could such strengthening occur in practical terms? Management and leadership interventions which are more long-term in scope can allow for the development and transformation of organisational relationships to be the focus. This is particularly key given the evidence that organisational context can modulate short-term and medium-term management and leadership programme outcomes over time (Kwamie et al., 2014). With explicit management change goals crafted beyond individual skills acquisition (towards, say, shifting organisational incentives, values, and beliefs, as well as support from the broader environment), this implies that if the organisational context changes, then the scope for management and leadership within the organisation can change too. Secondly, focusing on systemic learning (variously called systems thinking or action learning (WHO, 2009a)) enables the evolution and adaptation of the system. Systemic learning denotes an emphasis on exposing underlying assumptions such that new ways of thinking can lead to new behaviours and organisational structures, thus fuelling systemic change. Such an approach provokes systems change from diverse parts of the organisation – not just the top – and accepts unpredictability as part of the process. A final focus would be unambiguous attention to innovation and creativity: original and imaginative ways of thought and decision-making to support management and leadership. Innovation is known to be important organisationally, yet it remains a minority feature in health systems strengthening. While an organic process, it must be led somehow, whether top-down or bottom-up. In this light, one might say that continued top-driven change is inefficient and expensive: it remains underpinned by principles of organisational control, which do not always allow for new organisational roles and relationships to emerge. The innovation

literature has overlooked the role of middle managers in bridging between policy and practice (Birken et al., 2012), and thus this is a field which requires greater analysis.

And so, while issues of management will continue to be critical for strengthening health systems, it is especially important that within complex adaptive health systems, management and leadership be well-balanced, and perhaps even re-balanced: understanding the workings of management and leadership – how they interact and emerge from their contexts to lead to particular outcomes – especially at operational levels of the health system, remains an important area of practice and policy research. Because of the urgency to perform, many low- and middle-income country health systems, especially in sub-Saharan Africa have been locked on management, while leaving behind or separating out leadership. We should not allow ourselves to be enticed by the allure of management's easy visibility and tempting order. Greater focus on systemic approaches to management and leadership capacity strengthening, such as interventions which are longer-term in scope, and address organisational relationships, systemic learning and innovation, is in fact the greater challenge. Ultimately, however, this challenge can help us to move past the existing bureaucratic status quo, and nudge our health systems towards enabling greater leadership, and thus greater change.

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APPENDIX

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ABSTRACT

Health system governance has to do with decision-making – who makes decisions, when, where, how and why. At the district level – the level of care which operationalises health policies – governance is critical, yet remains little understood. Governance has the ability to influence health system performance, and this is essential in maternal and newborn health, where timely decisions are required to support policy implementation. In this regard, district managers are particularly important. They are the link in the middle of the health system, connecting top-end policy formulation to bottom-end implementation. Their abilities to interpret, translate, support and challenge policy will have an effect on what gets operationalised. However, capacity weaknesses in district management and leadership are often cited as a factor in poor health system performance.

This thesis seeks to deepen understandings of district-level management, leadership and decision-making for policy and programme management and implementation for maternal and newborn health. Within this, the thesis also seeks to understand the scope for change that an intervention to strengthen management and leadership capacities can bring.

This thesis contributes to the applied field of health policy and systems research by drawing on policy implementation theory, organisational management theory and complexity theory as its theoretical basis. A realist approach methodology was undertaken to understand the contexts in which district managers are embedded, how this influences their decision-making, and what the effects of a managerial intervention are, given these contexts. The thesis followed an embedded case study flexible design. The first case study was an exploratory qualitative case study to understand how and why district managers make decisions in maternal and newborn health policy implementation. The second case study was an historical case study of district manager decision-space over time. The third case study was an explanatory qualitative case study of the management and leadership intervention. The final validation of our theorising throughout the cases was achieved through the administration of a questionnaire across all district health management teams of the Great Accra Region.

This thesis demonstrates that district managers find themselves in contexts of strong hierarchical authority and resource uncertainty – in particular, lacking financial transparency. This promotes a management and leadership typology which attunes managers towards serving the health system bureaucracy, resulting in reduced district-level responsiveness to maternal and newborn health challenges. The outcome is that district manager decision-space is narrow surrounding resource allocation decisions, and this in turn affects local planning programming and management.

The thesis further demonstrates that broader patterns of centralised governmental decision-making have affected the development of the district health system over time. Particularly, the sequencing of decentralisation processes has ensured that national-level decision-making has remained empowered in contrast to district-level decision-making. System fragmentation – through reduced Government of Ghana funds and increasingly verticalised donor funds – has also been a contributor. This accounts for the observed hierarchical

authority and resource uncertainty which affects district managers. As a result of these contexts, this thesis also showed that an intervention to strengthen management and leadership capacities was limited in its sustainability.

This thesis raises the issues of health system organisation as critical to the potential of district management and leadership effectiveness. It provides evidence that weaknesses in district management and leadership arise out of the organisational governance mismatches in autonomy and responsibility. It suggests that in strengthening management and leadership, approaches which seek to address organisational capacities, not only individual capacities, are needed to convey sustainable change. Advancements in this regard have the scope to improve district manager decision-making for maternal and newborn health policy and programme implementation in the future.

Chapter 2 introduces the theoretical foundations and methodological approaches taken to answer the study questions. An overview is given on how this thesis is positioned within, and contributes to the applied field of health policy and systems research. The chapter then goes on to present the theoretical perspective which underpins the research (critical realism), and the bodies of theory which are drawn upon and blended to make the analytic arguments: policy implementation theory, organisational management theory, and complexity theory. As a way of conducting the study of complex interventions in complex contexts, we present our selection of realist methods as appropriate for answering our study questions. We describe the phases of our study design in-depth. The chapter ends with a description of the research setting.

Chapter 3 describes the policy contexts in which district manager decision-making occurs to understand how these dynamics influence district-level management and leadership in one district in the Greater Accra Region. By enlarging conceptions of management and leadership beyond the individual manager to encompass systemic interactions (using complex leadership theory), we demonstrate that the dominant modes of top-down planning (i.e., strong hierarchical authority) and resource uncertainty promote a type of management and leadership at district level which gears district-level management towards serving the bureaucracy of the health system instead of enabling managerial responsiveness to emerging district-level MNH challenges. The relevance of this chapter is in its defence of 'weak' district-level management and leadership, demonstrating it to be an expression of the character of the system, not solely attributable to individual managerial capacities. Our theory development in this chapter acts as an initial step towards evaluating the introduction of a management and leadership programme intervention later (see Chapter 7).

Chapter 4 refines and validates our theorising on district manager decision-making. By employing a questionnaire across the entire Greater Accra Region we seek to measure and describe the wider generalisability of our initial findings. The results are largely concordant with earlier findings, yet we are able to nuance our understanding further. Critically, this chapter presents the challenges of accountability for district managerial decision-making as they relate to organisational complexities.

Chapter 5 delves into an historical analysis of decentralisation processes in Ghana to explain the evolution of the district health system and current configuration of district manager decision-space. Given the importance of pattern-searching, and the temporal quality of context, this was a necessary step. The chapter shows how over time, policy feedback mechanisms in the broader democratic governance of the country have had strong centralising tendencies, which have in turn influenced decision-making within the health sector, and more specifically, the development of the district health system. Such tendencies have been influenced by the sequencing of decentralisation processes, which have privileged national-level interests vis-à-vis the district-level. This has resulted in power balances favouring the national-level through strengthened vertical accountabilities and resource dependencies. As such, the bottom-up genesis of the district health system has been reversed, and district manager decision-space has contracted over time, thus moving away from the original district vison of primary health care.

Chapter 6 makes the linkage between the policy contexts of district manager decision-making and the practice contexts of frontline provider decision-making by presenting the challenges of multiple interactive issues affecting frontline MNH clinical decision-making. The chapter makes the link to the broader ACCELERATE project, and identifies the mix of tacit knowledge, guideline availability and client influences that frontline providers employ in providing MNH services, within a context of systemic resource constraints. The chapter underscores the reality of conditions which managers must steward and provide management and leadership oversight capacities for in the delivery of MNH services, and implies the degree of responsiveness required. Furthermore, the chapter points to the insufficiency of a management and leadership type which is bureaucratic, and thus non-responsive in nature.

Chapter 7 revisits the existing policy context of district manager decision-making to evaluate the implementation of the Leadership Development Programme (LDP) in the same district explored in Chapter 3. All programme interventions are always introduced into pre-existing contexts. Therefore, based on our earlier theorising, we investigate possible explanations between (1) the organisational contexts of hierarchical authority and resource uncertainty, (2) the mechanism of the LDP (i.e., its programme theory) to strengthen management and leadership and lead to improved decision-making, and (3) and the lack of observed institutionalisation of the learned management and leadership practices (or evidence of any other residual organisational change) as a result of LDP introduction over the medium-term.

In **Chapter 8** the thesis concludes with a discussion of the experiences and lessons on using realist evaluation methodology in the study setting for the questions we raise and on the MNH policy and program implications for sustainable ways of improving district-level governance. We begin with the implications of our findings. Then we reflect on the experiences and lessons of undertaking such a research approach to addressing our research questions. The accumulated evidence of these chapters points to the need for transformational health systems change which can empower district managers to be more responsive and efficient in policy implementation. This necessarily involves addressing the

tensions between the individual and the system in emerging patterns of management and leadership. Therefore recognising systemic capacities for management and leadership will require different types of capacity strengthening interventions – such that can promote systemic learning to enable greater creativity and innovation – to be identified and implemented. Moreover, within the global MNH agenda, the current dominance of top-down 'accountability' interests of supra-national actors poses a difficulty the strategic operation of the district in achieving MNH performance targets. This will need a serious look to accelerate progress on increasing the impact of district managers as *leaders*, and not simply managers of top-down directives. Finally, we discuss possibilities for 'real change' in the ongoing debates of re-vitalised decentralisation in Ghana.

SAMENVATTING

Het besturen van een gezondheidsorganisatie gaat over het nemen van beslissingen – wie ze neemt, wanneer, waar, hoe en waarom. Op het districtsniveau – daar waar gezondheidsbeleid operationeel wordt – zijn sturingsprocessen cruciaal, maar niet vaak het object van onderzoek. De kwaliteit van het management op dit niveau is een belangrijke factor voor de kwaliteit van een gezondheidsorganisatie en die is weer cruciaal voor reproductieve gezondheidszorg, waar goed getimede beslissingen nodig zijn om de uitvoering van beleid vorm te geven. Hiervoor zijn managers op districtsniveau erg belangrijk. Zij staan in het midden van de gezondheidszorg als verbinding tussen de formulering van algemeen beleid en de uitvoering in de praktijk. Hun capaciteit om beleid te interpreteren, ondersteunen en uit te dagen heeft een effect op wat in de praktijk wordt uitgevoerd. Echter het gebrek aan capaciteit van deze managers op districtsniveau wordt vaak genoemds als de reden voor het zwakke functioneren van gezondheidszorg, met name in het domein van reproductieve gezondheid.

Dit proefschrift heeft als doel het verdiepen van inzichten in het management, leiderschap en beslissingen op districtsniveau met betrekking tot de uitvoering van beleid en programma's in reproductieve gezondheidzorg. Hierbinnen wordt ook aandacht gegeven aan de mogelijkheden voor verandering naar aanleiding van een interventie om management en leiderschap capaciteit van district managers te vergroten.

Deze studie draagt bij aan het veld van toegepast onderzoek in gezondheidsbeleid en gezondheidsorganisaties, met een theoretische basis op het gebied van beleidsuitvoering, organisatiestudies en complexiteitstheorie. Een methodologie gebaseerd op realistische evaluatie theorie werd ontworpen om de context waarin managers opereren te begrijpen, en hoe deze context hun beslissingen beïnvloedt en wat de invloed van deze context was op de effecten van interventies om hun functioneren te verbeteren. Hierbij werd een flexibele case studie benadering gevolgd. De eerste case studie bestond uit een exploratieve studies om te begrijpen hoe en waarom district managers beslissingen nemen ten aanzien van de uitvoering van beleid op het gebied van reproductieve gezondheidszorg. De tweede case studie was een historische case studie van de beslissingsruimte die managers hadden door de tijd heen. De derde case studie bestond uit een kwalitatieve studie van een interventie om de kwaliteit en het leiderschap van managers te versterken. Tenslotte werden de theoretische lessen gevalideerd met behulp van een enquête onder alle managers op districtsniveau in de Grotere Accra Regio.

Het proefschrift laat zien dat managers op districtsniveau zich in een strakke hiërarchie bevinden te maken hebben met onzekerheid ten aanzien van de beschikbaarheid van hulpbronnen (personeel, financiën, infrastructuur en hulpmiddelen en medicijnen – met name door het ontbreken van financiële transparantie. Dit bevordert een management stijl en type leiderschap dat managers stuurt in de richting van dienen van de bureaucratie van de gezondheidszorg, en minder op het ingaan op de uitdagingen op het gebied van reproductieve gezondheidszorg. De beslissingsruimte van managers is beperkt ten aanzien

van besluiten over hulpbronnen en dit heeft grote invloed op de planning en het management op lokaal en districtsniveau.

Het proefschrift laat verder zien dat bredere tendensen van gecentraliseerd overheidsbestuur de ontwikkeling van de gezondheidszorg op districtsniveau hebben beïnvloed. In het bijzonder heeft de wijze waarop decentraliseringsprocessen zijn uitgevoerd tot machtsbehoud van de centrale overheid geleid ten opzichte van de districten. Fragmentatie, als gevolg van de vermindering van fondsen van de Ghanese overheid en de toenemende verticaal verdeelde donor gelden, heeft hier ook aan bijgedragen. Dit verklaart de hiërarchische organisatie en de onzekerheid over hulpbronnen en hun effect op managers.

De organisatie van de gezondheidszorg komt daarbij naar voren als een kritische factor voor de mate waarin managers effectief kunnen managen en leiderschap kunnen tonen. Het proefschrift laat zien dat zwakheden in management en leiderschap op districtsniveau ontstaan door de mismatch tussen autonomie en verantwoordelijkheid die in de organisatie is ingebouwd. Het laat zien dat om duurzame veranderingen die management en leiderschap versterken interventies noodzakelijk zijn die eerder gericht zijn op organisatorische factoren dan op individuele capaciteiten. Organisatorische veranderingen hebben de potentie om management op districtsniveau en de uitvoering van programma's ten behoeve van de reproductieve gezondheidszorg te verbeteren.

In **Hoofdstuk 6** wordt de verbinding gemaakt tussen de beleidsomgeving van beslissingen op districtsniveau en de praktische context van de beslissingen van eerstelijns gezondheidswerkers door in te gaan op de veelvoudige uitdagingen voor klinische beslissingen in reproductieve gezondheidszorg voortkomend uit de interactie tussen praktische en beleidskwesties. Het hoofdstuk maakt ook de verbinding met het overkoepelende ACCELERATE project waar dit proefschrift onderdeel van maakt en identificeert het mengsel van impliciete kennis, de beschikbaarheid van richtlijnen en invloed van cliënten dat gezondheidswerkers gebruiken in het verschaffen van reproductieve gezondheidszorg in een context waarin hulpbronnen ontbreken en schaars zijn. Het hoofdstuk brengt de realiteit van de omstandigheden in beeld die managers moeten creëren en managen en hun management en leiderschap capaciteiten voor de verschaffing van reproductieve gezondheidszorg en ook de mate van vereiste flexibiliteit. Het hoofdstuk laat verder zien dat de bureaucratische wijze van management en leiderschap niet responsief is en te kort schiet.

Hoofdstuk 7 gaat terug naar de beleidsomgeving van managers op districtsniveau om de uitvoering van het Leiderschap Ontwikkeling Programma te evalueren in hetzelfde district als in Hoofdstuk 3. Programma interventies worden altijd geïntroduceerd in een bepaalde context. Met dit gegeven onderzochten we, op basis van eerder theoretisch denken, de verbindingen tussen (1) de organisatie context van hiërarchische autoriteit en onzekerheid over hulpbronnen; (2) het mechanisme van het Leiderschap Ontwikkeling programma (d.w.z. de programma theorie; en (3) het geobserveerde gebrek aan institutionalisering van de programmacomponenten op het gebied van management en leiderschap (en het

ontbreken van bewijs voor enig andere verandering in de organisatie) als resultaat van deze interventie op de middellang termijn.

Hoofdstuk 8 besluit het proefschrift met een betoog over de ervaringen en lessen met betrekking tot het gebruiken van een realistische methodologie voor evaluatie in de onderzoeksomgeving en de vragen die er aan vooraf gingen en de implicaties voor beleid en het programma voor reproductieve gezondheidszorg en voor duurzame manieren om het management van de gezondheidszorg op districtsniveau te verbeteren. Daarna volgt er een reflectie op de ervaring en de lessen die we kunnen leren uit het gebruik van een dergelijke onderzoeksmethode om deze vragen te beantwoorden. Het gezamenlijke bewijs vanuit alle hoofdstukken wijst in de richting van de noodzaak van een meer veranderingsgerichte benadering van de organisatie van de gezondheidszorg op districtsniveau, die meer macht geeft aan district managers zodat zij beter kunnen inspringen en efficiënter kunnen zijn in de uitvoering van beleid. Dit betekent noodzakelijkerwijs dat de spanning tussen individu en systeem als het gaat om management en leiderschap geadresseerd moet worden. Erkend zal moeten worden erkennen dat er voor systemische capaciteiten voor management en leiderschap andere types interventies nodig zijn en geïdentificeerd en uitgevoerd moeten worden, om zo systemisch leren te bevorderen voor meer creativiteit en innovatie. Bovendien vormen binnen de mondiale agenda voor reproductieve gezondheidszorg, de huidige dominantie van top-down verantwoordingstructuren op basis van de belangen van supranationale actoren een probleem om op het niveau van districten de doelstellingen voor een verbeterde reproductieve gezondheidszorg te halen. Dit moet serieus bekeken worden om vooruitgang te versnellen en de invloed van district managers als *leiders* en niet alleen als managers en uitvoeders van verticale directieven. Tot slot bespreken we de mogelijkheden voor ‘echte verandering’ binnen het huidige debat over revitalisering van decentralisatie in Ghana.