

Sub-national Health Management and Leadership Strengthening in Eastern and Southern Africa:
Understanding the Enabling Environment

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Abstract

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Sub-national health management and leadership development is a critical component of primary health care strengthening, which is under appreciated, resourced, and theorized. Though the role of the wider institutional, systems and policy environment has been recognized as important to effectiveness of management strengthening interventions in the literature, in practice these components are often under-addressed, limiting sustainability and impact. This integrated learning experience explores sub-national health management and leadership strengthening in Eastern and Southern Africa, drawing on experience from UNICEF's District Health Systems Strengthening Initiative (DHSSi) (2019-2022) and a subsequent case study that aimed to better characterize the enabling environment for this work in Malawi. Insights from the application of different conceptual frameworks in the Malawi context are used to better characterize the enabling environment for sub-national health management and leadership strengthening there and contribute to a newly proposed framework to support pre-intervention situation analysis and intervention design for this work more broadly.

Table of Contents

Table of Contents	i
List of Figures	iv
List of Tables	v
Acronyms	vi
Acknowledgments.....	viii
Dedication	ix
Chapter 1: Introduction	1
1.1 Overview.....	1
1.2 Goal, Aims and Organization of this Integrative Learning Experience.....	3
1.3 Note on Reflexivity.....	5
1.4 Ethical Clearance	6
1.5 Concluding Note.....	6
Chapter 2: Literature Review	8
2.1 Changing position of health systems strengthening in the global health landscape	8
2.2 Conceptualization of health management, leadership and governance in the context of health systems strengthening.....	9
2.3 Investment in sub-national management, leadership and governance in the context of changing global health policies and models.....	11
2.4 Issues and frameworks for health management & leadership strengthening at the sub-national level in low- and middle-income countries.....	15
2.5 Professionalization as a Strategy for Health Sector Reform.....	21
2.6 Common challenges: culture, evidence, scale and durability	23

2.7 Concluding Note	27
Chapter 3: The District Health Systems Strengthening Initiative.....	29
3.1 Institutional Setting: UNICEF	29
3.2 Geographic Setting	32
3.3 Design and Experience	36
3.3.1 DHSSi Theory of Change.....	37
3.3.2 DHSSi Implementation Experience	45
3.4 Political Economy Analysis Studies for Sub-National Health Planning and Management.....	49
3.5 Evaluation of the District Health Systems Strengthening Initiative	54
3.6 Concluding Note	57
Chapter 4: Examining the Context for Health Management Strengthening in Malawi: The Application of Two Frameworks	58
4.1 Introduction.....	58
4.2 Background.....	58
4.3 Research Team.....	61
4.4 Methods	61
4.4.1 Study Design	61
4.4.2 Conceptual Frameworks.....	62
4.4.3 Participant Selection, Recruitment and Participation.....	65
4.4.4 Data Collection.....	70
4.4.5 Data Analysis	72
4.4.6 Limitations	75

4.5 Findings and Implications.....	76
4.5.1 Part I: Context for Competency Development: A Stock Take of Themes from the WHO Leadership and Management Development Framework.....	76
4.5.2 Part II: Health Management Professionalization Pathway	103
4.6 Concluding Note	119
Chapter 5: A New Framework for Understanding the Enabling Environment for Sub-National Health Management Team Strengthening and Implications for Application	120
5.1 Introduction.....	120
5.2 Reflection on approaches to diagnose the enabling environment for health management strengthening.....	122
5.3 Theory of Change or Framework for Situation Analysis?.....	126
5.4 Proposed Framework for Understanding the Enabling Environment for Sub-National Health Management and Leadership Strengthening.....	127
5.5 Operationalization of the Enabling Environment for Sub-national Health Management Team Strengthening Framework.....	136
5.6 Implications for UNICEF’s HSS Approach to Sub-National Health Systems Strengthening	138
5.7 Conclusion	140
References.....	142
Appendix A: DHSSi Maturity Model Scale and Definitions.....	160
Appendix B: Chapter Four: Additional Tables	165

List of Figures

Figure 1: WHO Leadership and Management Strengthening Framework, 2007	18
Figure 2: Management Sciences for Health Leading, Managing and Governing for Results Framework	20
Figure 3: UNICEF’s HSS areas of work aligned with PHC strengthening	31
Figure 4: Illustration of a Bottleneck Analysis Chart Displaying Six Determinants of Coverage	39
Figure 5: Illustrative Causality Analysis Using Five Whys Approach to Assess Human Resources Bottleneck	40
Figure 6: Initial DHSSi Theory of Change	44
Figure 7: Overseas Development Institute’s Problem-Driven Framework for Applied Political Economy Analysis ¹²⁹	50
Figure 8: Domains and Sub-topics Explored in Findings Part I based on the WHO Health Leadership and Management Strengthening Framework	77
Figure 9: Enabling Environment for Sub-National Health Management Team Strengthening Framework	128

List of Tables

Table 1: Population, Health and Health Financing Context in Kenya, Malawi, Tanzania and Uganda	35
Table 2: Illustration of Ten Determinant Framework for Antenatal Care (ANC) Intervention.....	38
Table 3: Number and percent of DHMT members on the MoH registry and who responded to the survey and overall response rate, by zone.....	67
Table 4: Overview of Key Informant Targeting and Recruitment.....	69
Table 5: Comparison of the orientation and factors included in the three approaches adopted to assessing the enabling environment for health management	125
Table 6: Factors, Sub-Factors and Guiding Questions for Situation Analysis for the Enabling Environment for Sub-National Health Management Team Strengthening Framework	131

Acronyms

ANC	Antenatal Care
BMGF	Bill & Melinda Gates Foundation
CHSS	Community Health Systems Strengthening
CFIR	Consolidated Framework for Implementation Research
CHE	Current Health Expenditure
Covid-19	Coronavirus Disease 2019
DHMT	District health management team
DHSSi	District Health System Strengthening Initiative
DHSS	Director of Health and Social Services
ESA	Eastern and Southern Africa
FPD	Foundation for Professional Development
GHI	Global Health Initiative
HSSP	Health Sector Strategic Plan
HSS	Health Systems Strengthening
IFMIS	Integrated Financial Management Information System
ILE	Integrated Learning Experience
L&MSC	Leadership and Management Steering Committee
LMICs	Low-and Middle-Income Countries
MDGs	Millennium Development Goals
MoH	Ministry of Health
MSH	Management Sciences for Health
NGO	Non-governmental organizations

OPM	Oxford Policy Management
PEPFAR	U.S. President’s Emergency Plan for HIV/AIDS Relief
PEA	Political Economy Analysis
PHC	Primary Health Care
PO-RALG	Tanzania President’s Office of Regional Administration and Local Government
QMD	Quality Management Directorate of the Ministry of Health of Malawi
SDGs	Sustainable Development Goals
SSA	Sub-Saharan Africa
ToC	Theory of Change
UNICEF	United Nations Children’s Fund
UHC	Universal Health Coverage
U.K.	United Kingdom
U.S.	United States
WHO	World Health Organization

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Dedication

I would like to dedicate this ILE to my two boys – Soren and Rivin – who were both born during my doctoral studies. You have made this journey longer and harder, but so much sweeter.

Chapter 1: Introduction

1.1 Overview

Primary health care (PHC), originally popularized through the Alma-Ata Declaration in 1978, has once again become a rallying cry of the global health community, formalized in a new PHC global declaration launched at the fortieth anniversary of the Alma-Ata meeting in Astana, in late 2018. In the Sub-Saharan Africa (SSA) region, efforts to ensure high quality PHC are considered the cornerstone of achieving Sustainable Development Goal (SDG) three –ensuring healthy lives and promoting wellbeing for all at all ages. Lessons from the first PHC movement, from efforts to achieve the Millennium Development Goals (MDGs) and more recent major health emergencies such as the West African Ebola epidemic and global Coronavirus disease 2019 (Covid-19) pandemic, underscore the importance of strengthening health systems¹⁻³. Despite global and regional policy consensus that strengthening PHC systems is critical^{4,5}, they remain weak in most Eastern and Southern African (ESA) countries. Building the capacity of sub-national health management teams to reform health systems and operationalize major national PHC strategies so that they respond to local conditions and communities is a critical element of this effort, which is under appreciated, resourced and theorized.

This integrated learning experience (ILE) explores sub-national health management and leadership strengthening in ESA. It draws on experience from the United Nations Children's Fund's (UNICEF) District Health Systems Strengthening Initiative (DHSSi) (2019-2022), which aimed to strengthen sub-national planning and management in four countries in the region (Kenya, Malawi, Tanzania and Uganda) through capacity development and improvement in the enabling environment for effective management practice. Despite DHSSi's intention to address contextual or enabling environment challenges to effective management practice, such as

accountability arrangements, institutionalization and decision space, this proved challenging in practice. Though these factors are complex and require long time horizons to modify, an external evaluation of DHSSi noted that more thorough investigation of a broader set of contextual factors in each country setting from the outset may have improved intervention design and effectiveness.

In this ILE the enabling environment is broadly defined as “*a set of inter-related conditions, such as –legal, bureaucratic, fiscal, informational, political and cultural—that impact on the capacity of ... development actors to engage in development processes in a sustained and effective manner.*”^{6,7} Development actors are considered expansively to include government and non-governmental actors engaged in initiatives to advance national development goals, in this case, health systems strengthening (HSS). The enabling environment conditions proposed in the quoted definition are broad and require elucidation in context, while also specifying how they might affect an intervention’s effectiveness to be meaningful⁷. While the term “enabling environment” is commonly used in international development discourse and the relevance of these conditions are well recognized, there is no common approach to determining how to define these factors broadly for development sectors, nor for specific intervention areas⁸.

This ILE attempts to contribute to the definition of relevant enabling environment factors for sub-national PHC systems management drawing on two theories illustrated through frameworks for health management strengthening — the World Health Organization (WHO) Health Leadership and Management Strengthening Framework⁹ and Linnander and colleagues’ Professionalization of Health Management Pathway¹⁰—as well as findings from a political economy analysis (PEA) study of the environment in which health managers operate. Malawi is used as a case to apply the two referenced frameworks, which intentionally look beyond capacity

development to gain a more nuanced perspective on the prevailing context in 2023 to inform future programming there. These frameworks were used to elicit Malawian policy maker and health management perspectives on a variety of factors ranging from human resource norms, to management support systems and job clarity (the full range of factors is described in section 4.4.2).

Beyond a better understanding of future priority areas for continued programming in Malawi, the relative utility of these frameworks is discussed alongside a broader PEA framework, which was applied during the DHSSi grant period. Based on the application of these three lenses, as well as insight from DHSSi experience, the ILE culminates by offering a new proposed framework to help illuminate the complex array of enabling environment factors that require consideration when designing sub-national health management and leadership strengthening interventions in the ESA context. Key questions aligned to this framework, which could be interrogated as part of a situation analysis to inform program design, are also included. The ILE further describes how such an approach might be operationalized in future initiatives aimed at sub-national health management and leadership strengthening to bolster PHC efforts.

1.2 Goal, Aims and Organization of this Integrative Learning Experience

The overall goal of this ILE is to contribute to the evidence and discourse on district-level management of PHC systems in SSA by reflecting on the DHSSi experience and a case study from Malawi to shed further light on relevant enabling environment factors to intervention effectiveness. The objectives of the ILE are to:

- 1) Set the stage for this analysis by situating PHC health management and leadership strengthening in the broader literature on HSS;

- 2) Present DHSSi's original theory of change, implementation experience, application of a PEA approach to understanding the enabling environment for health management and evaluation findings, including the recommendation for more in-depth consideration of contextual enabling environment factors during intervention design;
- 3) Using Malawi as a case, illustrate enabling environment factors and challenges, through the application of two health management strengthening frameworks, and
- 4) Propose a new framework for considering enabling environment factors, including guiding questions for its application, when designing sub-national health management strengthening interventions.

The ILE is structured as follows:

Chapter one provides an overview of the ILE; presents its aims and structure and addresses reflexivity and ethical clearance.

Chapter two reviews literature on HSS generally and health management strengthening at the sub-national level, in particular. In doing so, it introduces frameworks used to explore the operating context in Malawi.

Chapter three describes DHSSi. It begins by framing the UNICEF organizational context and the geographic setting for this work in ESA. It then explains the initial DHSSi theory of change

and discusses implementation experience. It presents the approach and findings elicited from a problem-driven PEA of health management. Finally, findings from a prospective formative evaluation of the initiative are discussed.

Chapter four employs Malawi as a case to explore contextual factors that affect health management strengthening interventions, such as DHSSi, through the application of two lenses drawn from the literature—the 2007 WHO Health Leadership and Management Strengthening Framework and Linnander et al.’s Health Management Professionalization Pathway themes^{9,10}. These frameworks are used to characterize contextual factors of relevance to this work in Malawi in 2023 and in doing so, surface key challenges for consideration when designing interventions.

Chapter five brings together learning from the DHSSi experience and findings from the exploration of the broader context in which health management and leadership strengthening operates in Malawi to offer a new framework for considering this work and suggestions for its application. It culminates with suggestions for how this approach may be executed, including implications for UNICEF’s HSS programming.

1.3 Note on Reflexivity

Following doctoral coursework in the Department of Population and Family Health at the Mailman School of Public Health at Columbia University, I joined the health team in UNICEF’s ESA regional office. In this role, I designed and managed a four-country (Kenya, Malawi, Uganda and Tanzania) initiative focused on strengthening district-level PHC planning and

management, which was funded by the Bill & Melinda Gates Foundation (BMGF) from 2019 – 2022.

My status as a UNICEF staff member influences how I have approached this ILE. Chapter four is intentionally formative in nature, rather than evaluative, and my affiliations were explained to respondents engaged during this study. Chapters two and five reflect on UNICEF’s DHSSi implementation experience and intentionally apply both personal insight from direct experience with this initiative with findings from structured studies and an evaluation of this work co-designed with external partners. In this regard, the ILE digests, contextualizes and reflects on both primary research and experience to make suggestions for how best governments and development actors, including UNICEF, can engage in this work.

1.4 Ethical Clearance

All primary data collection for this ILE was done with the permission of and in collaboration with the Ministry of Health (MoH) in Malawi. This study received ethical clearance from the National Committee on Research in the Social Sciences and Humanities of the National Commission for Science and Technology in Malawi (Protocol number P.02/23/724) as well as the Columbia University Institutional Review Board in New York, USA (Protocol number IRB-AAAU3864).

1.5 Concluding Note

This chapter is an introduction to the ILE. It presents its objectives and structure and includes information on the author and ethical clearance. The following chapter situates sub-national health management and leadership strengthening in the broader literature on HSS in

(LMICs) low- and middle-income countries. In doing so it highlights its relevance to PHC and presents frameworks that will be used in chapter four to characterize the enabling environment for health management strengthening in Malawi.

Chapter 2: Literature Review

2.1 Changing position of health systems strengthening in the global health landscape

Broad-based, or “horizontal,” approaches to improving population health, such as HSS, have come in and out of vogue as animating forces in the global health policy arena for decades. Despite their appeal, these strategies have frequently been side-lined by narrower, disease-focused global health initiatives (GHIs) that are better defined by theories of change, implementation protocols, and have clear measures of progress ¹¹.

The PHC movement, with principles outlined in the Alma-Ata Declaration of 1978, proposed the transformation of health systems in favor of providing essential services closer to where people live, informed by community participation and local context ¹². This policy shift necessitated holistic reorientation and strengthening of sub-national health systems rather than continued investments in centralized tertiary care. Though initially popular, support for PHC quickly waned and global health has since been dominated by more vertical approaches to achieving health impact, exemplified by dominant disease specific GHIs and institutions.

In recognition of the limitations of vertical programming, in part perpetuated by specific targets used by the MDGs, global health policy dialogue again called for greater emphasis on HSS in the late 2000s ¹³. In 2016, this was concretized in a global commitment to achieving universal health coverage (UHC) by 2030 as part of the Agenda for Sustainable Development. HSS is a core strategy for achieving this aim ⁴. Discourse in support of HSS was further bolstered by the 2014-2016 West Africa Ebola epidemic, a disaster largely attributed to weak health systems ¹⁴. At the fortieth anniversary of the Declaration of Alma-Ata in 2018, PHC was resurrected as the basis of UHC and SDG three—to ensure healthy lives and promote wellbeing for all at all ages. A new global declaration and PHC Operational Framework make the case for

renewed investment in this approach citing its relevance to health outcome improvement, economics and responsiveness to communities^{15,16}. New global coordination mechanisms and country-level monitoring mechanisms have also been erected to focus efforts on this aim^{17,18}. Nonetheless, the global health institutional arrangements that have championed and financed vertical programs remain intact, well-funded and no new major investment mechanisms dedicated to PHC or HSS, without a specific disease angle, have emerged.

Now that the world is recovering from the unique challenges wrought by the Covid-19 global health pandemic, strong, resilient, responsive and adaptive health systems are arguably even more important. It remains to be seen whether global health efforts can balance the need for bolstering global health security and its commitments to PHC strengthening, both of which are ultimately required to ensure robust health systems.

2.2 Conceptualization of health management, leadership and governance in the context of health systems strengthening

There have been numerous conceptualizations of health systems put forward in the literature. Some describe the bounds and goals of health systems¹⁹; some the policy levers or “control knobs” used to achieve health systems goals²⁰ and others the key components or sub-systems of health systems²¹. However, WHO’s Health Systems Building Blocks framework, released in 2007, has retained currency as the dominant model despite critique that it is overly focused on health systems inputs. Since 2007, policy discourse critiquing the Building Blocks framework has emphasized the importance of how health system components interrelate^{22,23}. It has also underscored the need to complement the expression of health systems “hardware”, such

as the building blocks, with “software,” encompassing relational aspects such as values, power relations and norms²⁴. Community or people are also missing in the Building Block framework and their importance has been elevated²³. In addition, complexity science theory, ascendant in the health systems field, emphasizes the dynamic nature of systems and the importance of context specificity, which is somewhat juxtaposed to the seemingly static nature of the building blocks.

Though arguably unique in definition, the concepts of management, leadership and governance are often conceptually fuzzy and these functions can be expected from the same roles in a health system, such as sub-national managers²⁵⁻²⁹. Leadership is characterized as “the ability to define priorities, set vision and mobilize the actors and resources needed to achieve them³⁰.” Whereas management often refers to the “processes of achieving pre-determined objectives through human, financial and technical resources²⁷.” Specifically, managers are expected to be able to plan, organize, direct, staff and control activities based on sound decision making to solve problems³¹. Governance may be considered “rules that distribute roles and responsibilities among societal actors and that shape the interaction among them³².” Some consider leadership skills a critical component of management, because health systems management often requires negotiating change and adapting management approaches to different political contexts³³.

Leadership and governance are a pillar of health systems according to the Building Block framework. However, management is not mentioned and thus does not have the same prominence. Management has instead been characterized as “software” that enables system “hardware,” such as health infrastructure, personnel and medical technologies, to function

^{24,27,34,35}. Some suggest that raising the profile of management is unpopular because it may compete for resources with direct service delivery³³.

Leadership is traditionally ascribed to policymakers at the national level. For instance, the Building Block framework implicitly pitches leadership and governance as mostly national-level government functions, such as the development of policies, frameworks, regulation, research, accountability structures and coalitions across sectors and with key actors ²¹. However, notions of leadership are expanding and there have been calls for more diffuse health leadership across health system levels to improve performance ^{26,30}.

Management, on the other hand, is better understood in the context of policy implementation³⁶, which can happen at multiple levels of the health system but is increasingly located at the sub-national level as governance is decentralized. Management may also be more explicitly considered a facet of organizational capacity required for health systems to function ²⁴.

Notably, a more recent health systems framework aligned to the SDGs and proposed by WHO's Africa Regional Office in 2017, includes health management as a specific area of focus under health workforce. It notes the need for investment in standards development, policy and training to support a professionalized health management workforce across the system, in addition to investments in community, clinical and administrative health workers³⁷.

2.3 Investment in sub-national management, leadership and governance in the context of changing global health policies and models

Health management, leadership and governance capacity at the sub-national level (referred to here as the second or third administrative level, such as the district, county or equivalent), where health policies and strategic plans are operationalized, is widely cited as

critical to the performance of health systems^{9,25,36,38}. Poor health management can contribute to the major documented constraints faced by health systems in LMICs, such as limited and under-optimized human resources; weak supply chain systems; limited overall financing and poor financial management and inadequate information use for prioritization, quality assurance and accountability^{1,39}. Lack of management capacity is also considered a major constraint to the scale-up effective health interventions⁴⁰. Poor health management can affect both the demand and supply sides of health services by disgruntling communities, who may not feel their concerns are adequately addressed or respected, and also health workers, who may not be well recognized or supported in their efforts. Challenges related to rude and even abusive treatment of clients by health workers, for instance, is a well-recognized challenge to continued health service utilization in many settings⁴¹. This is influenced by poor health infrastructure, but also a lack of supportive managerial behavior for staff, as demonstrated through several case studies⁴².

Management strengthening became a focus of study in global health during the first PHC movement of the late 1970s and 80s. This policy priority coincided with a wave of decentralization reforms, during which post-colonial governments relinquished some central control to peripheral areas⁴³. Reorientation of health systems toward PHC was largely dependent on decentralization, which requires the empowerment of sub-national administration and management⁴⁴.

Many early efforts to strengthen district health management in LMICs were inadequate, short lived and ineffective^{45,46}. As noted by Collins and Green, “to decentralize functions without accompanying strengthening of lower-level management capacity can lead to the de facto abandonment by the state system of those functions⁴⁴. Some continue to question whether decentralization has improved health outcomes⁴⁷.

One reason that investment in leadership and management has been inadequate is that doing it well is a tricky undertaking. As proposed by Frenk, “probably the most complex challenge in health systems is to nurture persons who can develop the strategic vision, technical knowledge, political skills, and ethical orientation to lead the complex processes of policy formation and implementation²²”. District management teams sit at the intersection of health policy and implementation and deal with the “everyday politics” of how institutions work^{24,48}. Managing the complex and changing conditions created by a range of organizational and political challenges, often with significant budget limitations, requires an array of competencies and skills.

Another reason that investment in this area has been more limited is that investments in management capacities without linked investments in institutional reform processes, which are more expensive and require longer time horizons to effect, are not as successful^{36,49}. Further, achieving consensus on how to monitor and assess progress for these investments is challenging. Instead of substantive institution building and reform, notions of broad-based PHC were substituted with “selective primary health care”, which prioritized a few more easily deployed health interventions⁵⁰. This occurred in the context of the economic recession of the 1980s during which LMICs were also pushed to limit social services in favor of debt repayment, further weakening health systems^{11,44,51}.

Since, vertically controlled disease specific health programs that operate through central control, take advantage of emergent technologies, such as vaccines, and favor the prioritization of narrow, measurable objectives have become the dominant model of international health assistance¹¹. This approach is manifest in major GHIs and the institutions that support them such as the Global Fund to Fight AIDS, Tuberculosis and Malaria, the Gavi the Vaccine Alliance, the

Global Polio Eradication Initiative and the United States President’s Emergency Plan for AIDS Relief (PEPFAR), though most have more recently incorporated funding streams for HSS. However, while GHI investments under the HSS banner vary, a significant amount of this funding is more akin to “health system support”, such as inputs provision or efforts in service of one disease program area, rather than cross-cutting HSS investments that strengthen the system overall^{52,53}. Further, given HSS is not necessarily strictly defined and monitored by these institutions, in practice, these funds are often considered gap-filling to round out disease-specific applications and do not always achieve their intended purpose⁵⁴. Much work remains to be done to better operationalize these funds in service of transformative HSS programming.

GHIs have had significant impact on health system function overall, particularly in low and lower-middle income countries, where donor funding constitutes a larger share of health financing ^{55,56}. While comprehensive reviews are hamstrung by limited evidence, existing studies suggest mixed effects of GHIs on health systems as a whole ^{51,56-60}. Similarly, their effect on sub-national health management, leadership and governance specifically is mixed. While they are often considered to have improved stakeholder input into planning processes, they have also marginalized government sub-national management and governance structures by bypassing them and weakening their ability to play their oversight and coordination role ^{57,61}. PEPFAR, in particular, which has had a dominant influence in SSA, typically has not directly invested in national structures in favor of channeling funds through non-governmental organizations (NGOs), which do not always perceive themselves to be accountable to sub-national health administrative structures^{61,62}. The need for GHIs to work in an integrated fashion with country planning and monitoring processes, to ensure their investments are in line with government priorities and reduce parallel systems has also been called out and has more recently become

more common⁵¹. Though structural limitations of donor government financing arrangements still favor achievement of disease-specific, reportable results, typically trumping even good intentions to support broader based HSS investments.

Though the global health policy pendulum has swung back to an embrace of HSS and PHC as part of the SDG agenda, management and leadership at the sub-national level have not necessarily been elevated as important investment areas. The global PHC Operational Framework launched in Astana includes thirteen “levers,” or guiding components of PHC. While political commitment and leadership and governance and policy frameworks are included, they are positioned at the policy-level, not as operational-level components¹⁵. The accompanying PHC Measurement Framework, released in 2022, includes management under models of care, but seems to refer to facility management rather than district management⁶³. Globally a strong constituency has formed around community health systems strengthening (CHSS) linked to PHC ambitions. In Africa, advocates suggest CHSS is required to achieve PHC given rapid population growth and stagnant health work force investment. The Community Health Roadmap, which aims to harmonize investment for CHSS, does not include investment in sub-national management other than investment in information systems to better monitor community health^{64,65}.

2.4 Issues and frameworks for health management & leadership strengthening at the sub-national level in low- and middle-income countries

Following greater attention to health management during the first PHC movement in the late 1970s and early 1980s, increasing development assistance for health in the 1990s made donors further question the sustainability of investments without stronger national health systems

and management⁶⁶. In 1990, the WHO convened experts working on health management to agree on research and agenda setting priorities. The status of health management, despite efforts to improve it, was lamented and training alone, as an approach to capacity building, was critiqued. The WHO Assistant Director General, who opened the meeting, called for management development that took a “system-wide” approach, that addressed not only improving skills and developing learning materials, but also reforming organizational structures and support systems. A fundamental issue that countries were grappling with at that time was that PHC strategies did not align with existing organizational structures and that it was incumbent on managers to try to reform structures and processes to improve coherence. Institutionalization and structural reforms were put squarely on the agenda for discussion.

This consultation resulted in a framework for analyzing approaches to health management strengthening for PHC that was later articulated in paper by Cassels & Janovski ³⁶. This framework includes four elements: 1) scope: including the target level of the health system, the technical area of focus, and the entry point for affecting change, 2) orientation: whether problem identification is done by managers or at a higher level with managers then asked to solve pre-identified problems, 3) methods: the training materials used to improve management and 4) organization: who is involved in management development, from training institutes to ministries of health. The framework drew on case study experience from countries. Though the WHO management consultation in 1990 emphasized the need to address organizational structures and systems to improve management, the framework itself is much narrower and more focused on competency development to solve management challenges.

The need for management development to be more attuned to context and systemic issues continued to be echoed in the literature after this consultation. In a WHO working paper on

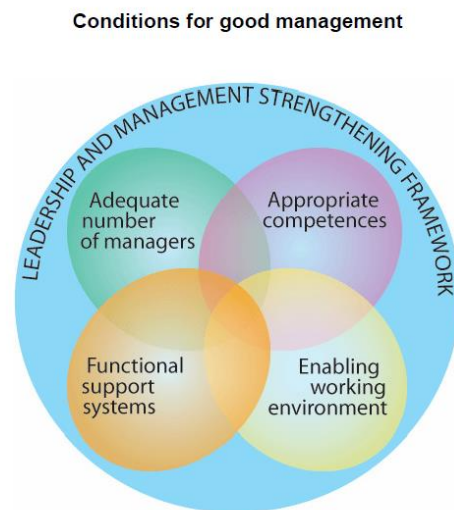
building capacity for health sector reform in 1995, Paul argues for consideration of both human and institutional capabilities. He notes, "...trained personnel will be effectively utilized only in organizational settings with certain capabilities."⁶⁷ Another study expressed that capacity building initiatives for health managers are limited by their operating environments and that systemic issues require attention ⁶⁸. Others recognized the importance of country ownership⁶⁹.

When it became evident that the health MDGs would mostly not be achieved, WHO began the working paper series "Making Health Systems Work ⁷⁰." This series emphasized the importance of sub-national health management, highlighting its importance to health systems and countries' ability to scale-up health services. As part of this work, WHO defined a "Leadership and Management Strengthening Framework ⁹." Unlike the 1990 framework, this one took onboard systemic issues more explicitly.

The framework includes four inter-connected components: 1) an adequate number of managers, 2) appropriate competencies, 3) functional support systems, and 4) enabling work environment (Figure 1). The first component refers to the establishment of an adequate number of managerial staff. It also incorporates an assessment of the turnover of staff, the level of effort on management compared to technical or clinical responsibilities and the qualification requirements to be a manager. Competencies, the second component, refers to knowledge, skills and attitudes or behaviors that are required to be a good manager. This component explores capacity building approaches that may be used to enhance these competencies, from training, to coaching and mentoring to on-the-job learning options. The third component, management support systems, refers to systems and processes set at the national-level to support management processes, including planning, financial management, information management, human resource management, and supply management. The last component on an enabling working environment

considers an assortment of factors such as decision space of managers; accountability structures; incentives to become managers and perform well; and support to managers in terms of supervision and growth opportunities. This framework was endorsed during a consultation in Ghana attended by many member states. WHO underscored that management strengthening is often not considered comprehensively and that not all components of the proposed framework had been equally prioritized in practice.

Figure 1: WHO Leadership and Management Strengthening Framework, 2007



Around the same time that WHO launched its management strengthening framework, Lucy Gilson began promoting leadership skills as an integral part of management training for the senior and mid-level managers. Until this time, the dominant focus has been on operational management competency development⁷¹. The need for leadership skills stemmed from the recognition that organizational change, by addressing values, norms and culture, was needed to help reorient health systems⁴². Gilson and colleagues have since championed the importance these more human dimensions of health systems, now commonly referred to as “software”^{24,35}.

Arguments also underscore the complex and dynamic nature of health systems and the need for adaptive leadership skills to respond to context and political negotiation ^{48,72}. In 2016 The Alliance for Health Policy and Systems Research took on leadership as the subject of a flagship report. In this report and an accompanying journal series, the Alliance makes the case for “participatory” leadership, or a more diffuse notion of leadership that encompasses a range of actors throughout the health system, rather than just those in senior national level positions ⁷³. They also link this agenda to the transition to the SDGs and the purported transition from vertical to horizontal health programming approaches.

Building on ideas promoting the integration of leadership and management functions, Management Sciences for Health (MSH) developed a leading, managing and governing for results strategic model in 2013 ⁷⁴. Rather than articulating investment areas to strengthen health management, like the 2007 WHO framework, it articulates the skills that align with these functions and the intermediate and ultimate results of investment in these areas (Figure 2). In this way, it links competencies to health systems performance. It also expands the target audience from managers to teams of managers.

Figure 2: Management Sciences for Health Leading, Managing and Governing for Results Framework



4

In the same newsletter, MSH called for the professionalization of health leadership and management, such that health management becomes a recognized profession. MSH also proposed a pathway for professionalization, which would establish an education and a career track for managers. To create this path, they posit four phases of work: 1) developing the value proposition, 2) developing leadership, management, and governance competencies, 3) creating a pipeline of managers and 4) institutionalizing standards and certification requirements. Not long after, Linnander and colleagues investigate this idea of a pathway for the professionalization of health management using case studies from Ethiopia and the United States. They conclude there are five themes that should be present to support the professionalization of health management: 1) a context in which management expertise is demanded, 2) a national framework that elevates the health management role, 3) standards for health management and an accompanying monitoring function, 4) a graduate-level educational path, and 5) professional associations¹⁰. These themes borrow from and nuance those put forward by MSH and offer components of what

could be a national strategy or set of reforms to sustainably improve health management. It is pitched at a slightly higher policy-level than the 2007 WHO framework and more fully specifies how to ensure the sustainability of investments by creating a constituency for these reforms.

2.5 Professionalization as a Strategy for Health Sector Reform

Professionalization has long been a strategy for public sector reform and modernization⁷⁵. Sociologists generally do not agree on what constitutes a profession versus an occupation; it is a social construct that has been used somewhat differently⁷⁶. However, criteria typically include the attainment of specialized knowledge that is acquired through education rather than practice alone and a commitment to work toward a social aim. While the professionalization process has evolved differently for various sectors and in different locations, it generally requires the involvement of state actors and builds a constituency that aims to protect the position and prestige of those who achieve professional status⁷⁷. In this way, it can be an effective strategy for sustaining investment in an area of work and institutionalizing education, recognition, and protection of certain skills in state systems. Once established, professions can be influential in institution building and reform⁷⁸. For instance, professions may develop norms and standards that are adopted and promulgated by institutions.

Different theories of the professionalization process exist. Some are demand driven, where individuals seek recognition for their set of skills to achieve “occupational closure” or protection from competition through state licensure and monopoly⁷⁷. Professionalization pursued in this manner has been critiqued as limiting innovation by restricting entry into areas of work for those with unique status⁷⁹. Other theories embrace a more supply-driven philosophy,

where the state has a heavier hand in the creation of professions to cultivate certain skills to address an identified need or market failure and arguably to exert more control over professional practice⁷⁷. While both demand and supply theories of professionalization emphasize the role of the state, Abbott argues that there are important influences beyond the state. Other interest groups and professions can also play a role in the ability of a group to achieve professional status. For example, as knowledge expands and new needs develop specialization within professions can occur, but existing professional interests must be attended to as part of this process to mitigate resistance⁷⁸.

Professionalism, or the enhancement of expertise, is considered one approach to public service modernization. Managerialism is another, now more dominant approach, which prioritizes efficiency, quality and cost-effectiveness improvement⁷⁵. Managerialism has had a major influence on public sectors, particularly in Europe and North America, since the 1980s. In some ways it conflicts with professionalism because it constrains the autonomy of professionals, or experts, by adopting standards, performance evaluation and greater accountability⁸⁰.

In the United States (U.S.) and United Kingdom (U.K.) contexts, the adoption of a stronger management culture in health systems was preceded by the recognition of the need for greater quality assurance⁸⁰⁻⁸². The elevation of quality as a major concern and a political issue provided the mandate for the adoption of a greater managerial orientation, which had a limiting effect on medical professionals' discretion, in settings where doctors enjoyed significant power and autonomy. While quality improvement is gaining ascendance in health policy discussions in LMICs, particularly in the areas of maternal and newborn health, response measures have mainly pushed for the establishment of quality standards, clinical mentorship and small scale quality

improvement projects rather than addressing management and accountability strengthening more broadly, though this is evolving^{83,84}.

Management imposes a form of professional control by asking clinicians to subscribe to certain healthcare delivery practices and priorities. Cribb describes how health professionals in the U.K. National Health Service were pushed to adopt a greater public health perspective in their work through an enhanced emphasis on goal monitoring and standards. He suggests that this orientation fostered a stronger cross-cutting management culture, without necessarily creating a new cadre of health manager⁸⁰. As such, it may be possible in other settings to strive to professionalize management without creating a wholly new cadre of health worker. This has been pursued in some places by adopting a professional-hybrid approach, which transitions existing health workers into managerial roles without necessarily requiring formal attainment of a management degree⁸⁵.

A push for the professionalization of health management borrows from both professionalism and managerialism approaches to public sector modernization. It is a strategy to advance managerialism in the health sector by cultivating a constituency for this approach that can progressively influence practices within a health system.

2.6 Common challenges: culture, evidence, scale and durability

Despite the development and evolution of frameworks to guide health management and leadership strengthening in countries, many countries have made limited progress in this area. This section will discuss key challenges: culture, evidence, scale and durability.

Culture

Presently, most health system managers in low-income and lower middle-income countries in ESA are clinicians with limited managerial training. Management is still mostly absent from the curricula of medical and public health degree programs in the region ^{25,86}. Clinical skills and experience are widely prized and reinforced through existing clinical professional associations for medical doctors, midwives and nurses. In some places, managerial roles are not compensated at the same level as senior clinical positions, disincentivizing candidates to enter these roles. In most settings, there is a pervasive clinical hierarchy based on type of clinical training and years of experience. In this environment, identifying and grooming management potential that may not size up to established norms of seniority can be challenging ⁸⁷. In addition, non-clinician managers, popularized in the U.S. in the context of hospital management, are not well accepted. Changing perceptions of the importance of management to the health sector and investment in management competencies and systems requires a shift in norms concerning which skills are well regarded and who is eligible for managerial posts and development.

Evidence

While there is consensus that HSS is important for achieving improvements in health status and that management and leadership strengthening can foster improvements in health system performance at the sub-national level, robust evidence demonstrating this link is still fairly limited ^{38,88–90}. This is in part due to the difficulty of monitoring and evaluating complex systems-level interventions over long time horizons. However, newer approaches to evidence generation in the field of health policy and systems research are becoming better accepted and

with this, different types of questions are being asked⁹¹⁻⁹⁴. Implementation research, for example, is increasingly favored as a means of understanding how best to implement interventions in context, given diverse contextual and complex systems environments, which may give rise to emergent factors that are not well understood⁹⁵. Nevertheless, there is no prevailing consensus on how best to measure health management, leadership and governance capacity or how this relates to health systems performance and ultimately health status improvement⁹⁶. Studies that do exist often report on individual changes rather than system-level improvements or embrace case study approaches^{28,38}.

Identifying sound metrics and measurement approaches for assessing management strengthening interventions is an important step in building a developing field of work. Without this it is difficult to determine if policies and interventions that aim to strengthen systems are effective, limiting potential investment in this area^{97,98}. Cassels and Javonski, proposed a hierarchy of evidence for management strengthening 1) management competence, 2) management performance, 3) service delivery and utilization, and 4) health status that could be useful in this respect. But it does not address the durability of these effects by including markers of systems change and institutionalization of management strengthening approaches. In this respect, Linnander and colleagues' framework for assessing the status of institutional and policy reforms in support of professionalization of health management is a useful complement.

Scale and Durability

Scaling complex, multi-dimensional HSS interventions that improve management decision making and performance is challenging. It requires rootedness in context; long time horizons; flexibility to adapt and learn; government stewardship and institutional capacity

building. Capacity building is often a messy and non-linear process⁹⁹. Due to the relatively limited evidence base for what works and how it works, these interventions are often caught in a paradox. They need to demonstrate effect to be scaled, but the conditions required to quantitatively measure effect limit scalability.

The Tanzania Essential Health Interventions Project exemplifies this contradiction. This intervention built the capacity of district health management teams in planning, resource allocation, general management skills and enhanced community involvement in two districts in Tanzania beginning in 1997¹⁰⁰. It was hailed as demonstrating that health systems investments can yield real health impacts after showing a 40% reduction in under-five mortality in five years¹⁰¹. Nonetheless, an evaluation of its impact on public policy found that stakeholders doubted whether this promising intervention could be scaled. Factors contributing to this skepticism included the small-scale design of the initiative, heavy reliance on external international expert technical assistance, lack of internalization of approaches or ownership by the MoH of Tanzania, limited sharing of lessons with other districts and stakeholders and the existence of competing approaches to support similar aims among different projects in the country¹⁰².

Similarly, the now heralded community-based PHC model in Ghana, originally tested in Navrongo and coined the “Navrongo model,” initially demonstrated positive impact. However, national stakeholders were at first reluctant to transfer this model to other locations as the research-based experiment was not considered replicable in more real world circumstances. Even once this model (now called Community-based Health Planning and Services) was supported in other districts, after a decade of implementation it had still not fully caught on due to piecemeal donor funding without an overarching, government-controlled resource base.

However, once the model could be fully localized, with the political and financial support of communities, it was able to be more sustainably scaled¹⁰³.

Scaling and ensuring the sustainability of interventions requires addressing structural, system-level and local political issues that can often be ignored while operating at small scale³⁶. While this has been recognized in the discourse and frameworks for health management strengthening for quite some time, exactly how best to diagnose relevant factors that should be considered in intervention design remains unclear. Even well-regarded management strengthening initiatives, replicated in multiple countries, which have shown promising short term results, continue to fail to achieve institutionalization, required for long term durability and impact^{104,105}. This suggests that factors other than those related to the frameworks and methods for competency development have a strong bearing on outcomes.

2.7 Concluding Note

This chapter charts the emergence and progression of health management and leadership strengthening as an area of interest in global health in relation to PHC. It provides an orientation to how HSS frameworks consider health management and leadership and presents frameworks that are specific to health management and leadership strengthening. These include the WHO Health Leadership and Management Strengthening Framework and the Linnander et al Health Management Professionalization Pathway themes, which are applied to the Malawi case study in chapter four. It concludes by highlighting common challenges faced in rooting health management interventions, pointing to the need to prioritize more seriously enabling environment factors, which can effect effectiveness and sustainability. Rooted in this

background, chapter three focuses on DHSSi. It presents the institutional and geographic context for this work and intervention design and experience, which aimed to address both competency development and a wider set of enabling environment factors for sub-national health management and leadership strengthening. This is followed by a discussion of the use of PEA to attempt to diagnose key enabling environment challenges in context and findings from DHSSi's evaluation.

Chapter 3: The District Health Systems Strengthening Initiative

DHSSi was a sub-national health planning and management strengthening intervention led by UNICEF and Ministries of Health and Local Government in four countries in ESA (Kenya, Malawi, Tanzania and Uganda) from 2019 to 2022. This chapter describes how DHSSi fit with UNICEF’s programming strategy for health, the geographic setting of the initiative, its original theory of change, implementation experience and two data collection exercises undertaken as part of the initiative: a PEA of sub-national health management study and a formative evaluation.

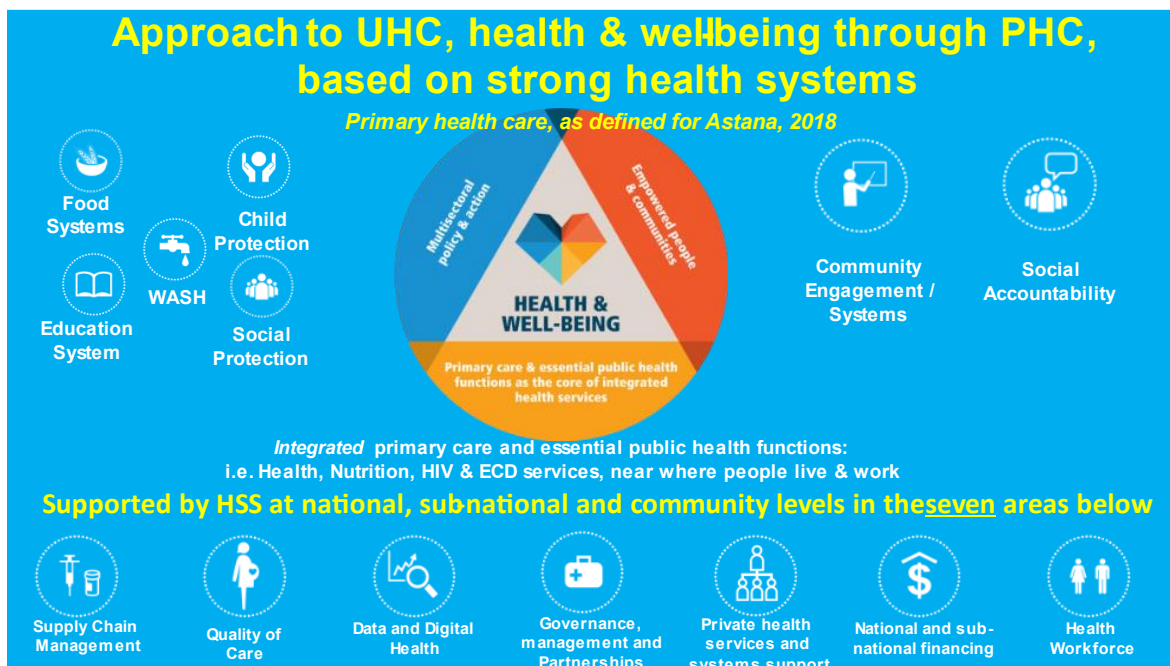
3.1 Institutional Setting: UNICEF

UNICEF is a United Nations agency dedicated to children’s rights and wellbeing that is active in 190 countries and territories globally. It prioritized HSS as a key approach to support its work to ensure children survive and thrive, which is one of its five institutional goal areas. UNICEF’s survive and thrive agenda includes programming in health (including HIV/AIDS); nutrition; water and sanitation and early childhood development. In 2020, UNICEF spent over 2.18 billion globally in child survival and development programming, constituting its largest investment across its multi-sectoral goal areas¹⁰⁶.

In the health sector, UNICEF supports programming in four areas: maternal, newborn and child survival; child and adolescent health and well-being; health system strengthening and health emergencies (both public health emergencies and health in humanitarian settings). UNICEF’s approach to HSS was formally defined and launched in 2016 and incorporated as one of three key approaches to how UNICEF realizes its global Strategy for Health 2016 – 2030^{107,108}. UNICEF defines HSS as “actions that establish durable improvements in the

provision, utilization, quality and efficiency of health services, broadly defined to include preventive and curative care, and that produce equitable health, nutrition and development outcomes for children, adolescents and women¹⁰⁷.” UNICEF’s HSS strategy targets national, sub-national and community-levels of the health system with inter-related systems strengthening interventions aligned with the global Operational Framework for Primary Health Care¹⁵. At the national-level, UNICEF supports MoHs to develop equity-focused health policies, strategies and plans. At sub-national level, UNICEF focuses on improving management capacity. At the community-level, UNICEF works to strengthen community platforms and ensure that they are well integrated into health systems. In response to identified bottlenecks to the effective performance of health systems at each level and in line with UNICEF’s areas of expertise, it also provides specific support to information systems; procurement and supply chains; social protection and welfare; engagement of the private sector; quality of care at community and facility-levels and health workforce (Figure 3).

Figure 3: UNICEF’s HSS areas of work aligned with PHC strengthening



While UNICEF generally acts as an advisor to governments, its modus operandi varies according to country context. In higher capacity environments, UNICEF typically focuses on policy and advocacy, whereas in lower capacity contexts and emergency settings UNICEF takes a more operational role. In most countries in the ESA region, UNICEF addresses both upstream policy formation and downstream operationalization of government programs through its country offices. UNICEF country offices have a high degree of discretion to define priorities and implement country contextualized programs in line with overarching global institutional priorities. Each country office collaboratively develops five-year country programs with host governments that comply with United Nations Development Assistance Frameworks. UNICEF’s ESA Regional Office provides technical support and oversight to UNICEF’s twenty-one country offices in the region.

3.2 Geographic Setting

Though the 21 countries of ESA¹ have made progress in reducing its under-five mortality rate from 163 to 53 deaths per 1,000 children from 1990 to 2021, still approximately 1.01 million (0.919, 1.204) children died in 2021, mostly of preventable and treatable causes¹⁰⁹. About 45% (455,000) of these deaths occurred in the first month of life. ESA has the second highest child mortality rate globally and 16 countries are off track in achieving the SDG indicator for under-five mortality¹¹⁰. Maternal mortality also continues to remain high. With approximately 59,000 maternal deaths in 2020, the region accounts for about a quarter of all maternal deaths worldwide¹¹¹.

Kenya is a lower-middle income country with a population of approximately 51 million. Malawi, Tanzania and Uganda are all low-income countries with populations of 20, 64, and 46 million respectively (Table 1). Health performance varies, but significant progress is needed to meet SDG 3 in each country (Table 1). In 2021, the under-five mortality rates ranged from 37.2 per 1,000 in Kenya to 47.1 in Tanzania. Maternal mortality ratios ranged from 342 per 100,000 in Kenya to 524 in Tanzania. Life expectancy estimates in all countries ranged from 63-66 years.

Health financing environments also differ between the countries, with external aid constituting a significant portion of health budgets (Table 1). Kenya has a significantly higher total current health expenditure (CHE) (U.S. \$88) and PHC expenditure (U.S. \$53) per capita than the other countries, where total CHE per capita ranged from U.S. \$33-39 and PHC per capita was between U.S.\$18-22. External health expenditure as a percentage of total health expenditure was 18% in Kenya, 33% in Tanzania, 36% in Malawi and 41% in Uganda (Table 1).

¹ According to the UNICEF regional grouping

According to policy, each country has decentralized its health system, such that operationalization of policy and management of performance takes place at the sub-national level. However, the degree of sub-national autonomy for key functions such as prioritization, financing, staffing and supply procurement varies by country. Highlights are included by country.

In **Kenya**, though there were several attempts at decentralization prior to 2010, central control of power remained largely intact. In 2010, Kenya approved a new constitution that called for the devolution of power to forty-seven newly created counties. Initially this major reform was meant to occur gradually over a seven-year period. However, in 2013 due to political pressure, all government functions were immediately devolved to new country governments¹¹². The county health department, managed by the county health management team, reports to the county assembly, the county's legislature. Kenya also has a system of sub-counties that have sub-county health management teams. Functionally the counties have significant autonomy over their affairs and evolving capacity.

Following democratization in **Malawi**, the Local Government Act and Decentralization Policy were passed in 1998. The Decentralization Policy aimed to devolve financial and management authority to local government¹¹³. Despite the creation of district assemblies in 2000, this policy has been very slow to take hold and decentralization has remained incomplete and was historically politically contested¹¹⁴. The MoH continued to supervise district health management teams (DHMTs) until very recently, including through its satellite zonal offices. In 2019, Malawi began to usher in new attempts at decentralization with an aim of achieving devolution. This reform process is still underway and has been accompanied by a revision of management roles in the health sector. Some key health system functions are still centralized,

including much of human resource management and supply procurement and distribution.

Malawi currently has 29 districts organized into three zones.

Tanzania has embraced the ethos of decentralization since the days of Nyere, Tanzania's first president. Its first decentralization policy was passed in 1972¹¹⁵. Local governments were established in 1982 and decentralization was furthered in the 1990s, notably with work towards a Decentralization by Devolution policy and the creation of local government authorities. During this period a ministry overseeing local government was established. Since 2015, this function has been managed through the President's Office of Regional Administration and Local Government (PO-RALG). While the MoH sets national policy direction, PO-RALG is responsible for health implementation. Though decentralization has long been in process, districts are still dependent on the central government for resources and more highly skilled health workers.

Uganda passed a decentralization policy in 1992 following a period of highly centralized governance during conflict. The following year it passed the Local Government Act which devolved responsibility for health management to district councils who oversee DHMTs¹¹⁶. Funding for the health sector is transferred to the district-level through block grants and districts have autonomy in their use⁴⁵. This said, local control of health funding is still limited as a significant portion of it flows through vertical initiatives and donor funded projects. The number of districts in Uganda have proliferated over time and there is no regional administrative level to support them. In 1980 there were 33 districts, in 2005 there were 78 and presently there are 134. As the number expands so do the administrative positions to service them, including DHMT positions, which require orientation and support.

Table 1: Population, Health and Health Financing Context in Kenya, Malawi, Tanzania and Uganda

	Kenya	Malawi	Tanzania	Uganda	
Population & health	Population (millions) (2021)*	53.006	19.89	63.588	45.854
	Universal Health Coverage Service Index ^x	56	48	46	50
	Under-five mortality rate (2021) ^y (SDG 3 country target = 25)	37.2	41.9	47.1	42.1
	Maternal mortality ratio (2020) ^z SDG 3 global target = 70)	530	381	238	284
	Life expectancy (years) (2020)*	63	64	66	63
Health financing	Current health expenditure (CHE) per capita in US\$ (2020) ^o	83	33	39	34
	Primary health care expenditure per capita in US\$ (2020) ^o	55	21	18	22
	Primary health care expenditure as % of CHE (2020) ^o	64	69	45	65
	Domestic General Government Health Expenditure (2020) as percent of CHE ^o	47	36	43	17
	External Health Expenditure (Aid etc) (2020) as percent of CHE ^o	18	36	33	41
Decentralization	Number of sub-national units	47 counties	29 districts	184 districts	136 districts
	Timing of decentralization policy	Devolution in 2013	Health decentralized in 2005	First policy in 1972 and advanced in 1990s	Decentralization formalized in 1997

Extent of functional decentralization in health sector	Rapid devolution with significant functional autonomy at county-level and evolving capacity.	Slow process, with more devolution in 2019/20. Some key functions such as H.R. and supplies still largely centralized.	Devolution approach, but still significantly dependent on centralized resources and HR processes for skilled health workers.	Rapid proliferation of districts from 45 to 136. Center maintains some control through conditional grants and supply management.
<p>Sources:</p> <p>*United Nations Population Division. World Population Prospects: 2022 Revision</p> <p>× World Health Organization. Global Health Observatory. Accessed at: https://www.who.int/data/gho/data/indicators/indicator-details/GHO/uhc-index-of-service-coverage</p> <p>ˆ Estimates generated by the UN Inter-agency Group for Child Mortality Estimation (UN IGME) in 2023, accessed at http://data.unicef.org</p> <p>˘ Trends in maternal mortality 2000-2020: Estimates by WHO, UNICEF, UNFPA, World Bank Group and UNDESA/Population Division. Geneva: World Health Organization; 2023. Licence: CC BY-NC-SA 3.0 IGO.</p> <p>° World Health Organization. Global Health Expenditure Database. Accessed at: https://apps.who.int/nha/database/ViewData/Indicators/en</p>				

3.3 Design and Experience

DHSSi was initially a three-and-a-half year effort (2019-2022) funded that aimed to strengthen planning and management capacity among sub-national health management teams to improve PHC system performance in Kenya, Malawi, Tanzania and Uganda. These countries were selected for inclusion because each UNICEF country offices had, to varying degrees, supported some sub-national evidence-based planning work in the past and were interested in continuing. Through national-level engagement with Ministries of Health and Local Government and partners, UNICEF and its partner, the Foundation for Professional Development (FPD), worked to elevate PHC health systems management as a priority and support national-level consensus building on priorities for strengthening sub-national health

management team capacity. This was complemented by work in specific districts (or equivalent) to build capacity. Ten districts in Uganda; five districts in Malawi; five counties in Kenya and four local government authorities in Tanzania were targeted. UNICEF envisioned DHSSi as a long-term agenda that would require a significant amount of time to contextualize, root, iterate and scale. BMGF agreed to fund an initial phase of implementation and UNICEF and BMGF were in discussion about a second phase, when BMGF's HSS strategy changed thematic and geographic focus. UNICEF is currently mainstreaming aspects of DHSSi into other funding streams, while also fundraising to ensure continuation of the work.

3.3.1 DHSSi Theory of Change

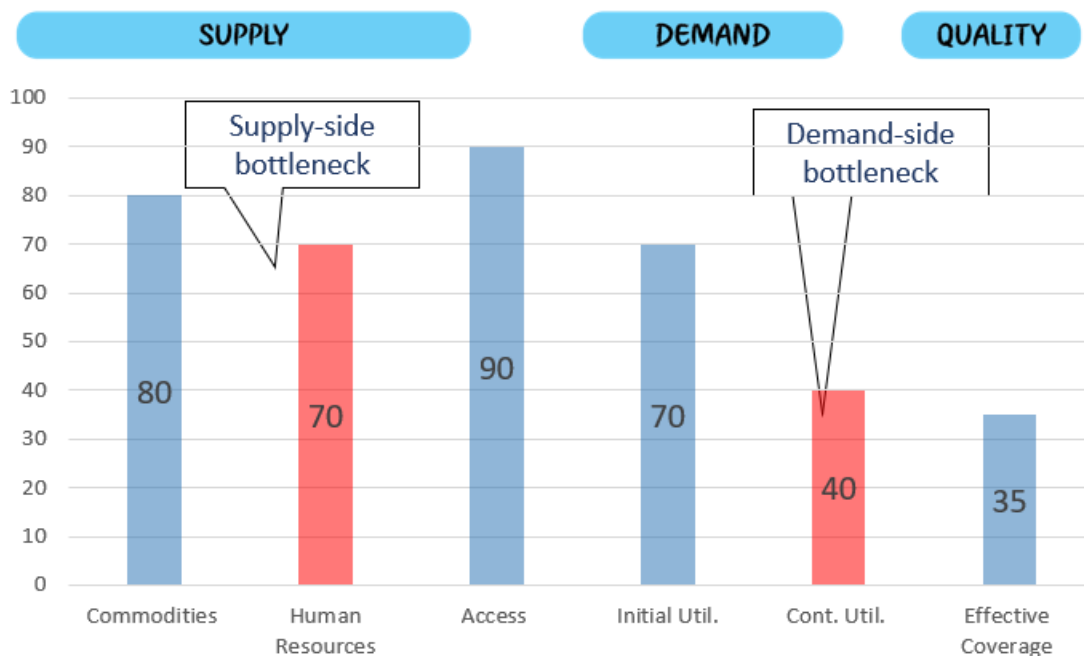
DHSSi expanded upon UNICEF's historical district health system strengthening intervention, which focused on improving evidence-based planning, resource allocation, implementation and monitoring. This approach employs a continuous improvement (diagnose, intervene, verify and adjust) cycle drawn from management theory and models. For the diagnose and verify steps a bottleneck analysis framework is used to identify and prioritize the most significant health system bottlenecks in a specific sub-national jurisdiction and then monitor whether bottlenecks are reduced through concerted district action, formalized in annual operational plans. UNICEF's bottleneck analysis framework was adapted from Tanahashi's health service coverage evaluation approach, which posits that different types of coverage (availability, accessibility, acceptability, contact and effective coverage) are required for an intervention to be optimally effective¹¹⁷. Building on this idea, UNICEF's framework proposes ten determinants of effective coverage of health interventions aligned to four domains: the enabling environment, supply, demand and quality. Six of ten determinants, those in supply,

demand and quality domains, are closely linked to Tanahashi’s coverage types and can be expressed as quantitative indicators that can be displayed in bar charts (Table 2 and Figure 4)¹¹⁸.

Table 2: Illustration of Ten Determinant Framework for Antenatal Care (ANC) Intervention

Domain	Determinant	Illustrative Indicator
Enabling Environment*	Policy and Legislation	Does policy support integrated ANC and follow-up?
	Social Norms	Do social norms support early and continued ANC attendance for all pregnant women (including adolescents)?
	Management and Coordination	Is there an effective management/coordination structure that oversees PHC/ANC, tracks progress and troubleshoots?
	Budget & Resource Allocation	Have sufficient resources been budgeted and allocated to PHC?
Supply	Commodities	Proportion of health facilities providing ANC services with no stock-outs of [Haemoglobin test (anaemia), urine dipsticks (ASB), blood sugar check, ultrasound, Tetanus Toxoid vaccine, Iron Folic Acid, IPTp, HIV and syphilis tests] during the last X months
	Human Resources	Proportion of health facilities providing ANC services with adequate number of [nurses] trained in ANC (according to national norms).
	Access	Proportion of the district population living within [5km] of a health facility.
Demand	Initial Utilization	Proportion of expected pregnant women who attended at least 1 ANC visit
	Continuous Utilization	Proportion of expected pregnant women who attended [4 or more/ nationally recommended #] ANC visits
Quality	Effective Coverage	Proportion of expected pregnant women who attended [4 or more visits] AND who attended the first visit within the first trimester of pregnancy (calculated)
<p><i>* Enabling environment indicators may be qualitative and should be defined based on country context. They are used to support causality analysis to determine why bottlenecks in the supply, demand and quality indicators may exist</i></p>		

Figure 4: Illustration of a Bottleneck Analysis Chart Displaying Six Determinants of Coverage



**Source: DHSSi Evidence Based Planning Training Material*

Note: Bottlenecks are typically identified by looking for the lowest bar on the supply-side and the bar representing the most significant drop off from access through effective coverage (though this rule of thumb may not always hold if, for example all supply side indicators are a major constraint or all supply side indicators are functioning very well). Denominators for the supply side indicators vary, but are often the number of delivery points in a geographic location. Denominators for demand and quality indicators are the same: the target population for the intervention.

While UNICEF has used different types of data to construct these indicators since its adoption of this approach, under DHSSi routine health data from health management information systems, logistic management information systems and human resource information systems were used, despite varying levels of completeness and quality of these data systems. During annual sub-national planning processes, only a locally pertinent selection of health interventions are analyzed, which aim to shed light on the broader system and promote joined-up action across multiple health program areas. Following the identification of priority bottlenecks, teams use a five-whys causality framework to identify proximate and root causes and determine feasible

solutions to address causes, with an emphasis on cost-neutral activities within the realm of influence of district health managers. At this point, enabling environment determinants are further reflected upon to see if these may contribute to any underlying causes. In addition, teams are encouraged to apply an equity lens to causality analysis to understand if causes may differ by demographic groups for demand and quality indicators. Performance and assumptions are revisited through quarterly and annual performance reviews.

Figure 5: Illustrative Causality Analysis Using Five Whys Approach to Assess Human Resources Bottleneck

<p>Problem: There are insufficient nurses to provide the services at all sites every day.</p> <ol style="list-style-type: none">1. Why do we have insufficient human resources, particularly nurses, in our district? <i>Because the MOH has assigned too few nurses to our district</i>2. Why are they not assigned to this district (and take posts elsewhere)? <i>There are very few applicants to begin with. Nurses just don't want to work here.</i>3. Why do nurses not want to work here? <i>Because it is remote and the housing is uncomfortable and occasionally insecure at night, which is a particular problem for young women living alone.</i>4. Why is the housing uncomfortable and insecure? <i>Because we never built staff housing, except at the district hospital for the doctors. Nurses rent houses in the neighboring communities, which are extremely poor and lacking resources to build houses with plumbing, electricity, secure doors and windows, etc.</i>5. Why have we not constructed safe staff housing, outside the district hospital? <i>It was always a resources problem. We never had money left in our budget for staff housing. But now we can see how this single issue is a critical bottleneck affecting so many services and leading to widespread inefficiencies. Perhaps the community could contribute some materials and labor to help offset the costs, and we might be able to make a stronger case to the provincial office that this is an important investment.</i>

**Source: DHSSi Evidence Based Planning Training Material*

Under DHSSi, this approach remained an entry point for engagement, but two other components were added. First, DHSSi expanded the remit of capacity building of sub-national health teams beyond planning to address a broader set of management competencies, such as leadership, stakeholder engagement, finance and human management, required to meaningfully operationalize plans. Second, it aimed to address localized or systemic barriers to the adoption

and use of good management practices and behaviors related to the political economy of such actions. Factors originally hypothesized to affect management practice included: 1) the institutionalization of effective practices in government systems¹¹⁹; 2) the availability of adequate decision space^{46,68,120}; and 3) accountability, both vertical accountability within the system, and social accountability with communities¹²¹. However, from the outset DHSSi intended to further study specific dynamics in each context. Through a PEA of health planning and management in target countries, UNICEF surfaced key issues and worked with stakeholders to determine how to address them, though time constraints and the Covid-19 pandemic mostly inhibited active implementation of new strategies in this area.

DHSSi developed one over-arching, broadly defined theory of change (ToC) that incorporated these three elements and was used as a frame of reference to support country-specific program design (Figure 6). This ToC reflected a traditional program theory pipeline logic model specifying intervention activity areas, outputs, outcomes and impact¹²². Embedded in the theory (and detailed in the project proposal), though not fully specified in the theory of change schematic, were assumptions about how and why the combination of proposed intervention blocks would contribute to specified outcomes. Context was not fully addressed in this generic rendering, however. Countries used the general ToC to develop more specific intervention plans, which varied according to context, delivery modalities and local opportunities. Most countries attempted to implement interventions in line with each of the proposed intervention blocks in the theory of change.

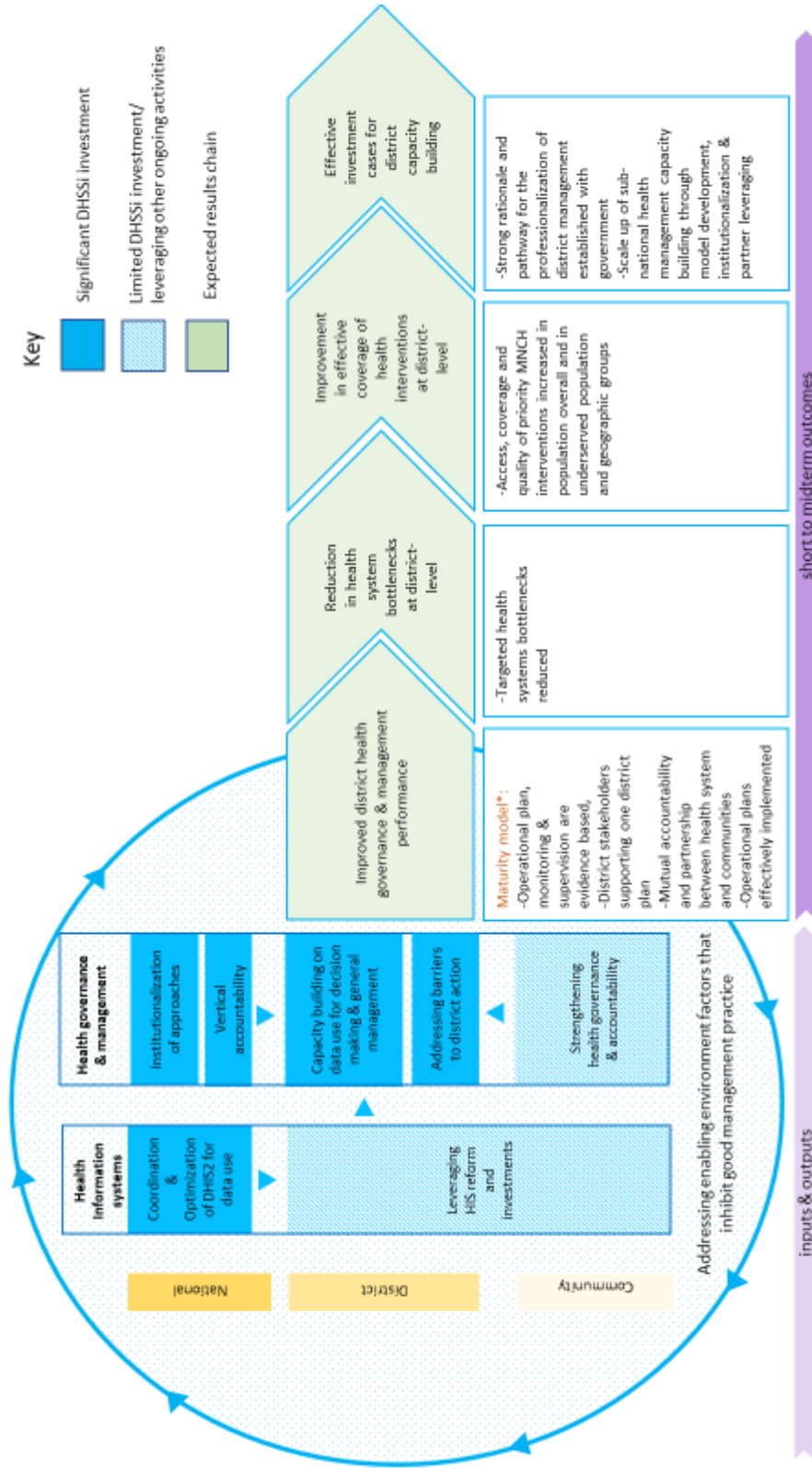
In Figure 6, on the left, the intervention elements are depicted with darker blue boxes, according to the health system components that they address and the approximate level of the health system that they target (ie. national, district or community). Less significant intervention

elements are depicted in lighter blue. These are areas where DHSSi was not able to invest much directly but tried to leverage complementary investments. To the right, the anticipated results chain is pictured in light green. Below it there is an illustrative description of how this was assessed. The most proximal anticipated result is the improvement of management and governance practices of sub-national health management teams. It was expected that the improvement of these practices could help reduce some priority health system bottlenecks that the sub-national health management teams prioritized for intervention. This improvement could then help increase the coverage of associated health interventions. Last if these results held, they could contribute to investment cases for greater investment in health management and its professionalization. While this causal chain demonstrates how DHSSi aimed to achieve health outcomes, within the grant period (2019-2022), it was expected that only short-term outcomes would change: improved health governance and management behaviors at the sub-national level and perhaps reductions in some identified health system bottlenecks. During the grant period (also marked by the start of the Covid-19 pandemic) it was not forecast that significant, measurable changes in health intervention coverage were likely.

Established metrics to measure health service utilization, outcomes and impact exist but there are no commonly agreed measures for assessing changes in health management and governance practices. As such, DHSSi developed and used a mixed methods maturity model approach to assess changes in these areas. Maturity models are increasingly applied to assess systems level interventions. They are a means of describing and assessing the performance of systems or processes by charting a typical sequence of levels of effectiveness^{123,124}. DHSSi's sub-national management maturity model articulates core practices that DHSSi aimed to improve and benchmarks for assessing the maturity of those practices along a spectrum of no practice to

effective practice. For each component of the maturity model a specific means of assessment was developed. UNICEF commissioned Oxford Policy Management (OPM), an external evaluation partner, to develop this model, undertake a baseline assessment of these practices in each intervention district and assess progress on an annual basis.

Figure 6: Initial DHSSI Theory of Change



3.3.2 DHSSi Implementation Experience

Though the DHSSi ToC had several blocks of intervention, work revolved around the central block in the schematic: “capacity building on data use for decision making and general health management.” Because UNICEF had previously supported work on improving data use for planning and monitoring in each context, this component of the intervention was most developed from the outset and relationships with Ministries of Health Planning and Monitoring and Evaluation Departments were also established. In some countries, the approach had been articulated in MoH national health planning guidelines and in other countries work commenced to integrate it into guidelines to support institutionalization. Nonetheless standard guidance and a training package did not exist. These were developed early on at the regional-level, adapted in each country and enhanced based on application throughout the initiative. Emphasis was placed on building local capacity on the approach as part of planning processes and iterating to improve it over time. This component of ToC comprised a significant proportion of the level of effort of UNICEF country offices, with efforts to incorporate new strategies to make planning and monitoring processes more effective, which varied by context and overtime. Strategies included systems for non-governmental partner coordination; financial mapping and supporting better institutional linkages between planning and budgeting cycles; implementation process tracking; and computer literacy training.

Components of the design related to information system strengthening largely aimed to be supportive of the planning and monitoring component of the intervention. In each country, UNICEF, collaborating with the University of Oslo (the developers and custodians of the widely used DHIS2 health management information system platform) and their local Health Information System Program (HISP) partners, worked with MOH, health information departments to

integrate a new DHIS2 application that supported the synthesis and visualization of routine health information to support the bottleneck analysis process. This required achieving consensus from many program departments on the appropriate selection of interventions and indicators for inclusion in the application; technical configuration within the DHIS2 system; and capacity building for system operators and users. This process was challenging both politically, in some cases, and technically, shedding further light on many underlying health information system constraints. Cluttered DHIS2 systems; missing or inaccurate target population size data; limited to no indicators for some non-communicable diseases; unmaintained human resources information systems; lack of interoperability of different information systems; DHIS2 system maintenance challenges and limited access to DHIS2 for some sub-national health managers were among the many issues confronted. Though these apps were intended to help make data use simpler, they ultimately illuminated data quality issues, system weaknesses and the need for further investment in health information system basics. In some ways they may have led to a process of “pre-mature load bearing,” where the systems were not yet equipped to manage these solutions, which in turn created additional pressure on the system¹²⁵.

General management capacity building, a new, but complementary area of work was not defined and UNICEF did not have prior country-level experience in this area in target countries. FPD, based in South Africa, received a complementary grant from BMGF to support UNICEF in this work as a regional partner. FPD is a recognized provider of higher education in management and the health sciences in South Africa and has expertise in pedagogical approaches for adult learners and health management. To better understand the operating environment and scope opportunities, UNICEF and FPD designed the landscape assessment. Three of four countries decided to engage in the health management space, with Uganda determining that the

environment was fairly mature, with other partners already significantly engaged. Instead, Uganda opted to address the chronic problem of under-staffing of DHMTs, recognizing that teams required better staffing levels to be effective.

Unlike planning, management does not have a clear institutional home within MoHs and the first task in many countries was to determine which departments within the ministries should be engaged and who might play a stewardship role. As management strengthening cuts across the mandates of several MoH departments (Human Resources Development, Planning, HSS and Quality Management, for example) and the jurisdiction of Ministries of Local Government (in decentralized systems), UNICEF supported the set-up of steering committees to bring relevant ministries, departments and external partners together to confirm sub-national management strengthening as a priority; define national visions for what an agenda around this aim should entail, articulate competency frameworks for sub-national managers and define capacity building curricula and approaches. This process took time and nurturing but was ultimately fruitful. It elevated the importance of sub-national health management strengthening and defined clear agendas for action linked to government strategies. Where possible management strengthening was tied to pre-existing government strategic initiatives and goals with high visibility, such as the Universal Health Coverage policy in Kenya¹²⁶ (part of former President Kenyatta's Big Four Agenda) and the "Makole Model" initiative, to promote greater quality assurance in Tanzania, spearhead by senior leadership within PO-RALG.

While all countries ultimately developed competency frameworks and curricula, only Malawi and Tanzania rolled them out at the district-level within the timeframe. These efforts were still in their relative infancy, with ongoing adjustment, integration of e-learning strategies and the development of coaching and mentoring schemes still underway. As such the full "dose"

of capacity building on planning, data use and management strengthening theorized to lead to changes in management practices was not achieved during this period in any context.

The DHSSi design recognized that capacity building cannot take place in a vacuum and that the wider environment in which managers operate should be supportive of good management practice to achieve intended effects. To add further definition to managers' wider environment and better understand specific barriers to good planning and decision-making practices at the sub-national level, UNICEF worked with Johns Hopkins University to undertake political economy analyses of these topics in Kenya, Malawi and Uganda. Tanzania did not participate because this study was considered too politically sensitive. Though originally planned to be implemented early in the DHSSi grant period, the study took longer than expected to design and was delayed significantly due to Covid-19. Thus, findings were only available late in the grant period. Nonetheless, UNICEF Health and Social Policy teams used the findings to begin to scope potential response options and inform fundraising proposals.

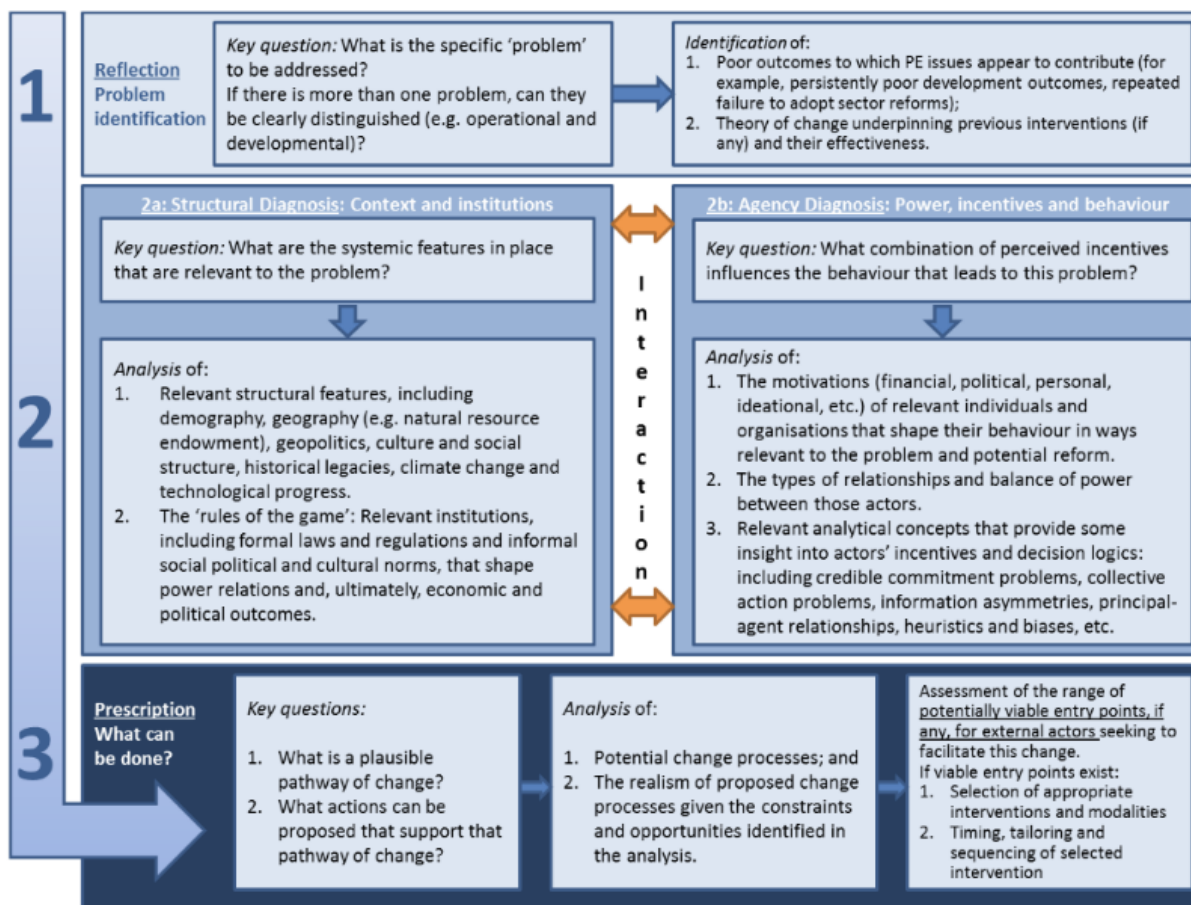
DHSSi coincided with the discovery and emergency phase of the global Covid-19 pandemic. This new reality posed a major challenge to the timely implementation of all originally forecast activities as both MoH and UNICEF staff pivoted to support national Covid-19 emergency responses. UNICEF officially "paused" implementation of DHSSi for a period of six months, and readiness to engage with this system strengthening intervention during a new, unexpected health emergency continued to be challenged in many respects. As a result of this context and other factors, some components of the work were not able to progress as far as originally hoped within the grant timeline.

The following sections provide overviews of key findings from the political analysis studies and the DHSSi evaluation.

3.4 Political Economy Analysis Studies for Sub-National Health Planning and Management

PEA, concerned with the interaction of politics and economics used to examine contextual features such as norms, incentives, power dynamics, and relationships between actors in institutional settings, is increasingly recognized as an important analytical approach to studying health policy and systems reform¹²⁷. To gain a better handle on the environment in which sub-national managers operate and how this environment shapes management decision making and management practice, UNICEF, Johns Hopkins University School of Public Health International Health Department, the KEMRI Wellcome Trust Research Programme in Kenya, the Centre for Social Research at the University of Malawi and the School of Public Health at Makerere University in Uganda undertook a problem-driven PEA, applying a practical framework articulated by the Overseas Development Institute^{128,129}. This framework was structured around two key diagnostic lenses: 1) a structural diagnosis, which examined systemic features of the context, including formal rules and norms of institutions and 2) an agency diagnosis, which looked at how behavior is shaped by relationships, power and incentives (Figure 7).

Figure 7: Overseas Development Institute's Problem-Driven Framework for Applied Political Economy Analysis¹²⁸



Questions related to these two domains were developed concerning planning, budgeting, community consultation and accountability arrangements and operationalized into key informant interview guides. In each country, three districts or equivalent were selected and stakeholders such as district health management team members, local government representatives, development partners, community representatives and national-level MoH representatives were interviewed. A document review was also undertaken, and framework analysis was employed to organize findings according to the two overarching PEA themes and sub-themes by respondent type.

Based on analysis and reports from three countries and cross-country analysis^{130–133}, several key themes emerged that highlight the complexity facing DHMTs in their efforts to marshal health system resources to deliver health outcomes for communities.

With respect to the **structural diagnosis**, the following key cross-country insights emerged:

1) Public financial management constraints:

There are underlying public financial management system weaknesses that undermine district action for health. While the nature of the challenges varies by country, some issues that arose include:

- Planning and budgeting processes are not always sequenced optimally, meaning that some districts plan in the absence of receiving budget ceilings and are required to re-calibrate plans after budgets are released. In addition, budgets are typically determined at the national-level, irrespective of sub-national requirements. In some countries, there is little leeway to advocate for a change in budget based on local-level priorities or plans.
- Further, annual health budget allocations are often released late from the central-level and incompletely, affecting districts' ability to execute plans as intended. Nonetheless, central-level requirements that budgets are spent in full within original timeframes persist. If budgets are not spent, future allocations are diminished. This can lead to circumstances where districts have very little time to spend large amounts of late arriving funds. To spend, priorities and activities are distorted. There is little accountability for national-level processes that do not operate according to schedule.

- In addition, budgeting guidance and financial management system requirements are not always aligned, complicating how budgets are developed and making financial monitoring of health programs challenging.

2) Inadequate health financing:

Financing available to districts is chronically low and oftentimes does not cover basic operations, with limited funds for discretionary activities. In all countries there are persistent underlying gaps in key health systems “hardware,” such as infrastructure, human resources and supplies.

It is challenging for districts to address health system gaps given limited budget allocation from the central-level, conditional funds with restricted use and difficulty raising resources locally. Though health system hardware improvements often rise to the top of district priorities and reflect specific demands from communities, district teams are usually unable to effectively address them, causing demotivation.

3) Work procedures are too complex:

Formal and informal requirements of the planning process, linked to the incorporation of additional interests under decentralization and parallel non-governmental actor processes, have become difficult to impossible to complete. Layering of bureaucracy can mean unrealistic processes, the need for slow approvals to act and limited decision space, stifling districts’ ability to effectively implement plans. Districts also reported that pre-determined targets handed to them were unrealistic given their resource base. In addition, the introduction of digital information

and planning systems, without broad requisite understanding of how to use them, can frustrate members of the team. There are formal requirements in some countries that non-governmental implementing partners incorporate their activities and budgets into district plans, with the aim of fostering greater coordination and reduction in duplication. However, this requirement is often not fulfilled.

With respect to the **agency diagnosis**, the study found:

4) Accountability arrangements are not clear:

Political and administrative decentralization alongside de facto highly centralized control of budgets has led to ambiguity, which complicates processes and accountability arrangements. Despite decentralization, decision making about funding remains largely centralized and with external donors. Most funding streams from central to district-level are earmarked, limiting sub-national decision space. Though theoretically DHMTs are accountable to local government and communities, this funding dynamic distorts de jure accountability arrangements. The existence of discrepant formal and informal accountability expectations can cause confusion and distress in health management teams.

An aim of decentralization is to improve local-level relevance and accountability to communities. However, achieving meaningful consultation processes can be difficult. First, recommended processes for how consultation should be done are often costly and difficult to undertake with available budgets and human resources. Secondly, it can be complicated to specify who represents community interests and what counts as community engagement, thus leading to gaming to satisfy requirements.

5) Current administrative capacity is inadequate:

Local administration and health management teams are neither adequately staffed in terms of numbers nor management capacities to effectively navigate this complex environment. Teams feel overburdened by unrealistic expectations. This weighs heavily on the system, leading to dysfunction, demotivation and staff turnover, which further weakens the system's ability to function.

These findings were discussed in workshops in each country and efforts were made to prioritize issues according to what was most salient and could be meaningfully addressed. Each country, to some extent, worked to incorporate proposed solutions into DHSSi implementation plans. These studies also prompted dialogue at the national-level in each country and between UNICEF Health and Social Policy sections to identify options and opportunities for mitigating financing and financial management barriers that affect health, in particular. UNICEF's Social Policy section has expertise in strengthening public financial management in the social sectors; financing for the social sectors and decentralization. Though their work typically targets ministries of finance and local government structures (whole government), there is increasing willingness to work within specific sectors. Among the challenges identified, UNICEF health and social policy colleagues prioritized the following three, within UNICEF's realm of influence, for joint action: 1) limited investment in PHC, 2) discordant health planning and budget processes and 3) unpredictable and late intergovernmental transfer of funds.

3.5 Evaluation of the District Health Systems Strengthening Initiative

UNICEF worked with OPM to conduct a three-year formative, theory-based, prospective evaluation of DHSSi¹³⁴. Specific evaluation questions were based on the Organization of

Economic Development Cooperation Development Assistance Committee criteria of relevance, coherence, efficiency, effectiveness, sustainability and impact. Impact was not fully assessed due to the short timeframe of the grant period. The evaluation employed document review; key informant interviews and focus group discussions with stakeholders at all levels; observation and quantitative data review related to bottleneck indicators prioritized by districts. UNICEF and OPM deployed a mixed methods maturity model, drawing on these data sources, to assess the status and changes in district planning and management practices in all districts annually. The evaluation team produced and presented findings and recommendations to UNICEF and government on an annual basis, which contributed to the adaptation of approaches and plans throughout the course of the initiative.

Overall findings suggested that DHSSi's work on planning was considered relevant by all stakeholders and its work on health management strengthening was considered highly relevant, as many sub-national health management teams had received little to no training on management or even orientation to their roles. The relevance of planning could have been augmented by earlier completion of the PEA study and work to address some public financial management issues highlighted by the PEA studies. With respect to coherence, DHSSi was found to be mostly well aligned with government processes, but the evaluation noted that there was scope for greater collaboration with other partners in some settings and for seeking enhanced coordination with other UNICEF strategic priority areas, such as social policy, to enhance effectiveness. Efficiency of the initiative in terms of execution of initial plans was affected by Covid-19 and other factors. Generally, the intended scope was delivered, though management capacity building of the sub-national level was more nascent than intended due to significant consultation required with government and stakeholders on vision during a period when Covid-19 was the dominant

priority. Effectiveness of the planning component varied by district and year, but DHMTs saw the initiative as supporting improvements in data use, planning and partner coordination, though evidence of this was mixed. Where there was more deliberate work to review and track plans, effectiveness was enhanced. It was too early to assess the effectiveness of the broader management strengthening work, though in Malawi, where work was the most advanced, capacity building was seen to improve management practice. The durability of this change was not clear, and Malawi was encouraged to continue developing follow-up coaching for district teams to deepen skills. Though it was too early to assess sustainability, the evaluation found that the management component, given heavy investment in developing government's vision and stewardship role as well as aligning partners, was considered well positioned to be sustained. Similarly, the planning work was well positioned for sustainability having been embedded in guidelines and given investment in building master trainers in countries. However, the evaluation would have liked to have seen clearer scale up strategies, work to simplify data use methodologies and less dependence on workshops for supporting planning capacity building, which were seen as costly.

The evaluation included extensive detail about implementation modalities, technical approaches and lessons learned. The lion's share of this analysis focused on the planning component and there was less review of the more upstream work on management. This may have been due, in part, to the level of emphasis on the implementation of the planning component. However, it may have also been a bias of the evaluation to investigate district-level effect. Nonetheless, one of the key lessons highlighted by the evaluation was the need for earlier, more extensive situation analysis, noting the importance of sufficient contextual understanding for improved project effectiveness and sustainability.

3.6 Concluding Note

This chapter summarizes the context, design and implementation experience of DHSSi, a three-and-a-half year, four-country initiative that aimed to strengthen sub-national health systems management in ESA. Though DHSSi recognized the importance of having a conducive enabling environment to support effective health management practice, ultimately many relevant factors proved difficult to diagnose and address. DHSSi's approach to do this involved the application of problem-driven PEA studies. This approach and the findings yielded are shared. The chapter concludes by offering highlights from an evaluation of DHSSi, including a key lesson learned regarding the need for better situation analysis of the enabling environment to inform intervention design. Based on this learning, chapter four sets out to unpack enabling environment factors using Malawi as a case and applying two conceptual lenses: The WHO Health Leadership and Management Framework domains other than competency development and Linnander and colleagues' Health Management Professionalization Pathway themes. It presents findings from their application, including additional considerations not overtly included in these frameworks.

Chapter 4: Examining the Context for Health Management Strengthening in Malawi: The Application of Two Frameworks

4.1 Introduction

This chapter employs Malawi as a case to explore contextual factors that affect health management strengthening interventions, such as DHSSi, through the application of two lenses drawn from the literature—the 2007 WHO Health Leadership and Management Framework and Linnander and colleague’s Health Management Professionalization Pathway themes. Both frameworks look beyond health management competency development of individuals or teams to address the broader context for health management strengthening. These frameworks are used to characterize enabling environment factors of relevance to this work in Malawi in 2023 and in doing so, surface key challenges for consideration when designing interventions. Additional themes are surfaced which are proposed to augment the frameworks.

4.2 Background

Following democratization in Malawi, the national Decentralization Policy and Local Government Act were passed in 1998. The Decentralization Policy aimed to devolve administrative and political authority to local government^{113,135}. Despite the creation of District Assemblies in 2000, this policy has been slow to take hold, decentralization has remained incomplete and was politically contested for some time. The health sector began to meaningfully decentralize in 2005 after the MoH issued guidelines for devolved health service delivery¹³⁶. During this period, efforts focused on deconcentrating authority from the central MoH to district health offices, which continued to report to the MoH as local government had yet to develop full

administrative capacity. In 2010, to strengthen the hand of the ruling political party, several amendments were made to the 1998 Local Government Act effectively limiting local power. Though political devolution was stalled, investment in the social sectors increased and they continued to decentralize, withstanding some internal resistance, including the maintenance of sensitive functions such as human resource management at the central-level¹¹⁴. In 2015, a new public sector reform process, codified in the National Public Sector Reform Policy 2018-2022 was initiated, in part spurred by the 2013 high-level government corruption scandal, “Cash Gate.” The policy prioritized the acceleration of devolution and public service management strengthening, including an emphasis on capacity building, leadership development and better inter-agency coordination. It committed to complete the devolution process set forth in the 1998 Decentralization Policy by empowering local councils with authority and capacity to oversee social service implementation¹³⁷. The Health Sector Strategic Plan II: 2017-2022 (HSSP), developed during this period of heightened concern for public service reform, similarly had a strong focus on governance.

With the issuance of these new strategies, efforts commenced to strengthen local councils in 2018 and 2019. As part of this process, line ministry operations were consolidated into a single administrative unit within local government. Health and social services were merged into one directorate headed by the newly established position of director of health and social services (DHSS). Functionally, DHSS positions were mostly filled by former district health officers, who had led DHMTs and provided direct oversight of the primary and secondary health care system. In their new role, DHSSs no longer directly managed hospital operations and their expanded purview promoted greater synergies between health and related social services, in line with the new global framework for PHC, which called for stronger multi-sectoral policy and

action¹³⁸. This change was also functionally accompanied by a changing perspective on the role of DHMTs, comprised of approximately eight members with different technical backgrounds, including medicine, nursing, environmental health, health promotion, administration, pharmacy, accounting and human resource management. Once understood as senior technicians representing the various health professions, DHMT members were increasingly considered members of a management unit charged with supporting the PHC system from the district-level.

Against this backdrop and in line with the HSSP II objectives, the MoH prioritized health management and leadership strengthening for DHMTs. With support from DHSSi, it established a Leadership and Management Steering Committee (L&MSC) in 2019, which included representatives from several MoH departments, the Ministry of Local Government, the Human Resources Department from the Office of the President and the Cabinet as well as several development partners. One of the first initiatives of this group was to create a capacity building program for DHMTs. Though historically, Malawi had had an orientation program for health managers, it had long been dormant, and most health managers were not exposed to management orientation or development opportunities prior to their hiring or on-the-job. At the time of writing, this program had rolled out to 18 of 29 (62%) districts and the MoH was actively looking for fundraising opportunities to extend it. In addition to management capacity development, the L&MSC debated other actions to strengthen management systems and reinforce management performance, but no specific actions have been rolled out to-date. This study aims to inform future priorities of the L&MSC, by assessing the enabling environment for sub-national health management strengthening, surfacing issues for consideration and priorities for action.

4.3 Research Team

This study was supported by a team of four researchers: Braeden Rogers (MPH, MIA), doctoral candidate, Mailman School of Public Health and UNICEF staff member on study leave; Helen de Pinho (MBBCh, FCCH, MBA), Assistant Professor Mailman School of Public Health; Bongani Chikwapulo (MBBS, MPH), Quality Management Directorate, MoH Malawi; and Bejoy Nambiar (MBBS, MHA, MPH, PhD), Health Specialist, UNICEF-Malawi. All members of the research team have implemented health management strengthening interventions and have experience working in Malawi. Braeden, Bongani and Bejoy collaborated on the implementation of DHSSi and were prompted by that experience to design this study. Study design and instruments were developed to ensure that the study would be relevant to MoH Malawi interests.

Study design, implementation, analysis and writing was led by the author. The author also conducted all interviews. Bongani and Bejoy contributed to study design; instrument piloting and refinement; study implementation and analysis. Given their relationships with target respondents, they did not have access to transcripts or individual survey responses and only received de-identified summary data. Helen contributed to study quality assurance and interpretation of findings.

4.4 Methods

4.4.1 Study Design

This study was designed as an instrumental case study¹³⁹, which explores relevant contextual features to sub-national health management strengthening in Malawi through the application of two conceptual frameworks, presented in sections 2.4 and in 4.4.2, in order to gain

an enhanced understanding of the enabling environment. Case studies lend themselves to in-depth exploration that aims to explain phenomena; typically draw on multiple sources of data and can support theory development and refinement¹⁴⁰. This case employs multiple types of data – experience from program implementation, document review, a survey targeting all DHMT members nationally and qualitative interview data with key informants—and aims to contribute to the refinement of MoH-Malawi’s priorities on health management strengthening, UNICEF’s HSS agenda and PHC systems management conceptual frameworks more generally.

Malawi’s health system is similarly organized to other countries in the region and its slow pace of decentralization is not uncommon. As with other DHSSi countries, health management is considered important, but until recently, it did not have a specific institutional home or stewardship arrangement in the MoH and most investments in health management strengthening prior to DHSSi were development partner led. Among the four DHSSi countries, presently Malawi is arguably one of the countries with the strongest government commitment to strengthening sub-national health management team capacity given recent policy shifts favoring renewed decentralization. Thus, the MoH in Malawi was invested in the conduct of this research, making data collection more feasible and extensive.

4.4.2 Conceptual Frameworks

Two conceptual frameworks were used to inform data collection instrument design. Three of four domains from the WHO Health Leadership and Management Strengthening Framework of 2007⁹(Figure 1) were used to structure online survey question development. These topics were further probed through key informant interviews. Because this framework is pitched more at an operational-level than a policy level, sub-national health managers were the

target group for this inquiry. The survey and follow-up interviews aimed to understand their perspectives and experience of the health management environment directly. Due to the breadth of themes included in the framework, a survey was used to take stock of all areas and interviews were used to probe emergent areas of interest in more depth. As the focus of the study was on contextual factors, the WHO framework domain on competency development was not specifically included. Domains and sub-domain topics proposed by WHO and included are outlined below. Where the study team added additional sub-domain topics it has been noted.

Included WHO Health Leadership and Management Framework Domains:

Domain 1: Adequate health managers

- Number of managers in post
- Duration in post
- Manager selection and continuity of supply

To this domain, we added topics on:

- Time spent on management (versus other clinical/technical work)
- Official designation in post

Domain 2: Management support systems

- Planning systems
- Information systems
- Human resource systems
- Finance systems

- Medicines and supply systems

The WHO sub-topic on self-management and administration was not specifically included.

Domain 3: Enabling work environment

- Policies, legislation, norms and standards that affect the delegation of authority
- Adequate support for managers
- Incentives to encourage staff to become managers and for performance
- Accountability for performance

To this domain, we added topics on:

- Job descriptions and job clarity. They are nested under the policy topic.
- Team cohesion
- Financing environment

Topics on team cohesion and the financing environment emerged inductively through analysis as a relevant topics for inclusion. Whereas, topics on job descriptions and clarity were identified as important factors for inclusion based on DHSSi experience.

Five themes from Linnander and colleagues' study on health management professionalization were specifically probed through key informant interviews to ascertain key informants' assessment of where Malawi stands along the professionalization pathway and surface opportunities and challenges to professionalization as a strategy for advancing health

management strengthening. This framework was probed qualitatively with a mix of national policy makers, sub-national health managers and other Malawi-based expert informants as the themes require some upfront explanation, are very broad and not easily answered through close-ended questions. They are also pitched at a policy-level, making national-level informant insights highly relevant.

Five Linnander et al Health Management Professionalization Themes:

1. Demand for health management
2. A national framework or policies on health management
3. Health management standards and monitoring processes
4. An educational path for health management
5. Professional associations for health management

4.4.3 Participant Selection, Recruitment and Participation

Data involving participants were collected through an online self-administered survey and key informant interviews.

Online survey

The survey aimed to be a census of DHMT members nationally. Though the composition of DHMTs is not always the same across all districts, DHMTs typically include the following positions:

- Director of Health and Social Services (team lead) (DHSS)
- District Medical Officer (DMO)

- Chief Preventive and Promotive Health Officer (DHPO)
- District Nursing Officer (DNO)
- District Environmental Health Officer (DEHO)
- District Health Services Administrator (DHSA)
- Pharmacist
- Human Resources Management Officer (HRMO)
- Accountant

At the time of this study, the MoH did not maintain a registry of DHMT staff contact information. To source all DHMT members' contacts, a list was compiled by the research team by reaching out to each of the 29 DHSSs in the country and requesting that they report the names, positions, email addresses and phone numbers for each of their DHMT members in January and February 2023. This effort resulted in a contact list of 190 unique DHMT staff members from 27 of 29 districts nationally. Two districts (Nkhotakota, from the central zone and Likoma, from the northern zone) did not respond by the time of data collection. The list was reviewed for redundancy and duplicate information was removed, for instance when one staff member was reported by two districts due to a recent transfer.

All DHMT members on the final list received an email from the Director of the Quality Management Directorate (QMD) in the MoH announcing the study and providing participant information, including the purpose, voluntariness of participation and confidentiality. This letter indicated that all DHMT members would be invited to participate in an online survey and some would also be invited for interviews. This was followed by a specific email request to participate from the author, which included a link to the online survey. Target respondents were

informed that they would receive MK 1,200 (~U.S.\$1.10) via a mobile air-bundle credit to offset any costs associated with internet charges during survey participation. This credit was issued to all participants and not linked to survey completion, which could not be determined as no personally identifying information was collected by the survey form or platform. Two email reminders were sent within a two-week period of the initial survey prompt. After two weeks, the survey was closed.

Of the 190 email addresses included in the contact list, two bounced and were discarded as invalid, reducing the total number of DHMT contacts to 188. Of these, 120 DHMT members opened the survey and 117 consented to participate and completed it, constituting a 62% response rate. Thirty percent of respondents were from the Northern zone, 21% from the Central zone and 49% from the Southern zone. Northern and Southern zones are slightly overrepresented in the sample and the Central zone is slightly underrepresented (Table 3).

Table 3: Number and percent of DHMT members on the MoH registry and who responded to the survey and overall response rate, by zone

	Northern zone	Central zone	Southern zone	Total
DHMT members on MoH registry (# & % of total list)	47 (25%)	57 (30%)	84 (45%)	188
Respondents (# & % of total respondents)	35 (30%)	25 (21%)	57 (49%)	117
Response Rate	74%	44%	68%	62%

The survey yielded responses from each position type in relative proportion to their numbers in the constructed contact list. However, district nursing officers are somewhat overrepresented (18% of sample, compared to 13% of list) and accountants were somewhat underrepresented (5% of sample compared to 9% of list) (Annex 1, Table 1).

Though the sex of all DHMT members is not known, gender was collected as a variable in the survey. Overall, 37% of survey respondents were female and 63% were male. DNO respondents were 86% female, whereas DHSSs were 87% male (Annex 1, Table 2), illustrating the gendered nature of some roles.

Key informant interviews

Key informants were selected for their knowledge and experience with health management and health management strengthening efforts in Malawi. Three types of informants were targeted:

- 1) National-level government policy makers engaged in health management strengthening,
- 2) Sub-national health managers, and
- 3) Non-governmental resident experts in health management.

In the first category, eight national government policy makers were included on a target list from six different government departments/groups and six participated. In the second category, the research team aimed to speak with health managers from five districts, with representation from each of the three geographic zones and to achieve a mix of DHSS and non-DHSS informants. The team also aimed to interview one zonal health team representative. To allow for face-to-face interviews, district selection was also informed by practical considerations related to availability of informants during the desired data collection period in late March and early April 2023 and the accessibility of districts during this period, which was shortly after Cyclone Freddy wrought much destruction in several districts in the southern zone. Some originally targeted districts had to be swapped due to the cyclone. Ultimately, seven DHMT

informants from five districts participated. In the third category, the team identified target respondents from four organizations and institutions, all of whom participated (Table 4).

Table 4: Overview of Key Informant Targeting and Recruitment

	Original target	Outcome
National-level government policy makers	8 policy makers from 6 different departments/groups	6 policy makers from 4 departments/groups
Sub-national health managers	<ul style="list-style-type: none"> ▪ DHMT representatives from 5 DHMTs, with representation from each of 3 geographic zones and a mix of DHSS and non-DHSS informants ▪ 1 Zonal team member 	<ul style="list-style-type: none"> ▪ 7 DHMT members from 5 districts (through 6 interviews) ▪ No zonal team ▪ 2 districts from central zone, 1 district from northern zone, 1 district from southern zone ▪ 2 DHSS and 5 non-DHSS informants
Non-government resident experts	Representatives from 4 organizations from academia, training institutes and NGOs	6 informants from the 4 targeted groups (through 5 interviews)
TOTAL	18	19

Following the composition of an initial list by the research team, non-DHMT target informants received an email from the MoH Director of the QMD announcing the study and indicating that they would receive a request for interview. Emails from the Director of QMD to all target informants were followed by emails from the author requesting participation in an interview. Non-response was followed up with outreach by WhatsApp, mobile text and phone by members of the research team to highlight the request, confirm willingness to participate and schedule meeting times.

4.4.4 Data Collection

Online survey

Block survey online survey platform (<https://blocksurvey.io/>) was used to develop the questionnaire and administer the survey. This platform was selected because it encrypts data and does not collect any personally identifiable information, including IP addresses.

The online survey opened with information for participants about the purpose of the survey, procedures for participation and information about voluntariness and confidentiality. Informed consent was requested to proceed.

The survey included thirty questions: twenty-nine close-ended and one open-ended. Questions were developed in line with the WHO framework domains and topics described under conceptual frameworks (Section 4.4.2). The final open-ended question allowed respondents to provide any further input they wished to share on the topic of health management. Efforts were made to ensure the language used in questions reflected terms in use in Malawi. The survey instrument was reviewed by three members of the research team for relevance and clarity of language and response options. The tool was further piloted with a MoH staff member to assess ease of use and clarity. Adjustments were made based on feedback.

Many of the survey questions were formulated with five-point Likert response options to capture DHMT attitudes about different subjects. Five-point, rather than three-point response options were used to allow greater variability and because they have been demonstrated to be more reliable¹⁴¹. As much as possible, conventional Likert response categories were used. Questions were not designed to create a scale.

Key informant interviews

A semi-structured interview guide was developed in English to 1) gather respondents' perspectives on where Malawi stood with respect to the five health management themes proposed by Linnander and determine if additional themes were relevant and 2) to further probe issues arising from the survey, composed to assess the WHO framework. The interview guide had two parts with questions reflecting these two aims. During the first component of the interview, a short slide deck, which defined health management professionalization and presented the five themes, was used to begin the discussion. The semi-structured interview guide was reviewed and refined by the research team and adjustments were made throughout the course of interviews to continue to tailor it based on emerging insight. It was determined by the Malawian-based research team members that it was appropriate to conduct all interviews in English as all target respondents were fluent in English.

Whereas the study was initially envisioned as a sequenced mixed methods design, with findings from the online survey informing topics probed in part two of the interview, in practice this was only partially achieved. Delays in institutional review board clearance compressed the study timeline and the online survey had not closed upon initiation of interviews. Instead, preliminary survey results were used to tailor interview questions. In addition, depending on the background of informants, some themes were probed more in depth than others to better capture their perspectives on areas in which they had greater expertise or experience.

In total, seventeen interviews were conducted with nineteen respondents. Two interviews were conducted as small group interviews (of two people each), where hierarchy was not considered a threat to candor. All but one interview took place face-to-face. This interview

was conducted by phone due to scheduling challenges. Interviews were held at locations selected by informants, mostly at their work sites, in private, with doors closed.

Interviews ranged in length from 23 minutes to 1 hour and six minutes, with most interviews lasting 45-55 minutes. All but two interviews were audio recorded, always with the consent of the informant. For one interview, the recorder failed. It was not possible to record the phone interview. Field notes were taken for all interviews, including those which were not recorded. Recorded interviews were transcribed using the online Sonix artificial intelligence-enabled software (<https://sonix.ai/>). Sonix transcriptions were edited by the author by reviewing transcripts and revisiting audio-recordings multiple times.

Document review

In addition to survey and interview data, key government documents and reports of relevance to health management strengthening and decentralization were reviewed to better understand the context. Documents included national policies; health strategic plans and strategies; implementing partner reports and relevant literature.

4.4.5 Data Analysis

Survey data

Survey data were cleaned and analyzed using Stata statistical software version 18. Descriptive statistics were generated for all quantitative questions, including frequencies and measures of central tendency, such as medians and means. Where significant variation in response categories were present, questions were also analyzed to understand if there was significant difference in response according to variables such as clinician status, length of time in

management roles, gender and geographic zone. Likert-type data were analyzed using non-parametric tests, as data were not assumed to be normally distributed. Specifically:

-Where there was a continuous dependent variable and dichotomous independent variable, independent T-tests were used;

-Where there was a continuous dependent variable and an independent variable with more than two categories a one-way Anova was used used;

-Where there was a dichotomous independent variable and an ordinal rank dependent variable, a Mann-Whitney test was used; and

-Where there was an independent variable with more than three-levels and an ordinal rank dependent variable, a Kruskal-Wallis test was used.

For the sole open-ended question, all responses were reviewed and grouped by theme.

Interview data

Transcripts were reviewed several times as part of the editing process. During these reviews data were also de-identified to remove reference to name, position, district assignment, and workplace affiliation. Beyond personally identifying information, efforts were made to remove statements that could reveal identity.

Following data preparation, a preliminary codebook was developed based on themes from the two conceptual frameworks. As transcripts were coded, new codes emerged inductively and were integrated into the codebook in an iterative process of development and refinement. All codes were specifically defined in the codebook, distinguishing codes from related codes with examples, where relevant. As part of the coding process, some codes were nested under others as child codes. Notes were kept to work through emergent themes and the use of codes was compared across cases to ensure consistency in application. As needed, codes were refined through this comparison process to ensure they adeptly captured themes and were applied consistently. Once the codebook was finalized, transcripts were re-read to adjust coding based on the updated codebook. All coding and analysis was done in Nvivo software version 14. At this stage of the research (ILE), codes were only applied by the author.

Following coding, data were analyzed using the Framework Method, a systematic approach to thematic analysis commonly used in policy, social science and increasingly health sciences research¹⁴². As part of this process, each case (statements from distinct key informants) were tagged with attributes related to informant type (national-level policy maker, DHMT member, non-governmental expert) and whether they were a medical doctor or not. While informant type was explicitly considered as part of the selection criteria for key informants, status as a medical doctor was not. However, the coding process revealed an emergent theme related to tension between doctors and non-doctors and differential treatment with respect to management career tracks. Consequently, this was considered an important stratifying variable for analysis.

Matrices were generated in Nvivo that cross-tabulated codes by cases, including their attributes. Where a code included multiple child codes, they were all plotted on the same matrix.

For more complex matrices, data were further reduced through researcher summary of coded content in the matrix in an additional column. For less complex codes, relevant statements were highlighted to underscore the most salient information. Matrices were used to draw out themes and make meaning, which was iteratively developed through notes kept by the author. De-identified frameworks were shared with the two-Malawi based research team members to support their review and contribution to the analysis. Relevant themes from the open-ended survey question were combined with those from key informant interviews.

Triangulation

Final analysis is based on a triangulation of data from document review, the survey and key informant interview, which helps improve internal validity of findings. Research team members' expertise in health management and the Malawian health system also informs interpretation.

4.4.6 Limitations

While this study sheds light on a broader set of conditions that can reinforce or hamstring effective management practice, it is also limited by several factors. First, the study was originally envisioned as a sequenced mixed-methods design with survey findings informing semi-structured interview guides. However, due to time constraints the survey only launched shortly before interviews and incomplete rather than final quantitative findings were used to inform interview topics. Some areas may have been further probed had complete results been available. Second, the MoH does not maintain a full registry of all DHMT staff. As such, it is not possible to understand the level of completeness of the list of DHMT staff assembled, as not all DHMTs have the same staffing complement. Though the research team does not believe the

list is significantly incomplete. Further the online survey aimed to achieve a census of all DHMT members. Though there was a solid response rate (62%) among those contacted, two districts were missed, and it is not known how many additional DHMT members may have been missed because they were not included on the contact list. Third, perspectives on certain topics varied considerably by DHMT staff member position. Additional interviews with a range of different DHMT members, including more females, may have provided additional nuance. Last, due to the case study design, findings may not be generalizable across other settings. However, the use of frameworks drawn from case studies in other settings suggests that the factors explored likely have wider applicability.

4.5 Findings and Implications

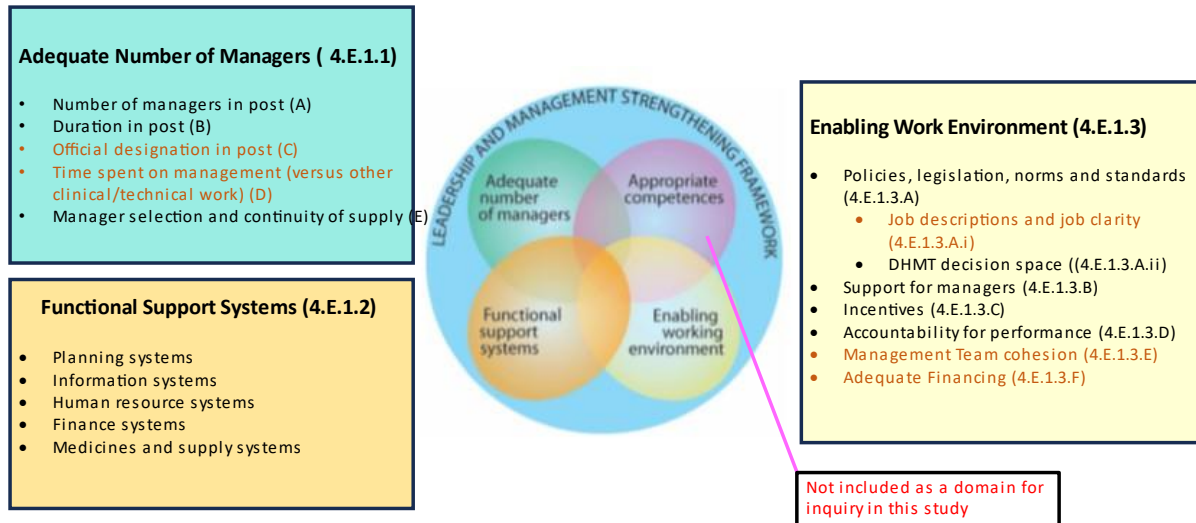
Findings are presented in two parts organized according to each conceptual framework used. Following the presentation of findings by conceptual framework themes, summaries underscoring important aspects are shared.

4.5.1 Part I: Context for Competency Development: A Stock Take of Themes from the WHO

Leadership and Management Development Framework

Part one explores the context for health management strengthening efforts in Malawi through the lens of three of four domains of the WHO Health Leadership and Management Framework: 1) availability of health managers, 2) health management support systems, and 3) the enabling environment. Findings are organized by domain and sub-topics (Figure 8) and summary conclusions are presented at the end.

Figure 8: Domains and Sub-topics Explored in Findings Part I based on the WHO Health Leadership and Management Strengthening Framework



Note: Orange sub-topics were added by the research team and did not originally feature as part of the WHO framework article. ILE section numbering has been added to guide navigation.

4.5.1.1 Availability of Health Managers

The WHO framework domain on an adequate number of health managers considers 1) how many managers are in post, 2) how long managers are in post, 3) how people are chosen to become managers and 4) strategies for ensuring continuity of supply. To this list, we added whether managers are in their post in an official or acting capacity, as this can affect the degree to which managers are able to exercise authority. We also added an assessment of time spent on management compared to clinical care, among medical doctors operating in DHSS and DMO positions, and generally, how much time all DHMT members spend on managerial tasks.

4.5.1.1.A Adequate Number of Managers

To assess the availability of managers, the MoH contact list of DHMT members was reviewed. This list included nine DHMT position types: the DHSS, who is the team lead; accountant; DEHO, DHSA; DMO; DNO; DHPO; HRMO and pharmacist. Six of 27 (22%) districts in the list had a full complement of nine positions. Five districts had fewer than six positions included (18.5%), with two districts having three or fewer persons listed. The most commonly absent positions are pharmacist (present in 44% of districts) and accountants (present in 63% of districts). All districts had a DHSS. It is likely that the absence of positions in the MoH list is due, in part, to incompleteness. Please see Annex 2, Table 3 for a full summary of the DHMT contact list.

4.5.1.1.B Length of Time in Post

Annex 2, Table 4 provides information on the mean and median length of time DHMT members have been in their current post, in health management roles at the district-level and in the health field in general. Accountants are not included in the last category, health field, as they may not see themselves as working in the health field specifically, or this question was misunderstood. Overall, most cadres have spent a significant amount of time in the health sector, especially DEHOs (median of 23 years), DNOs (16.5 years), DHPOs (16.5 years) and DHSSs (12.3 years) (Annex 2, Table 4). DMOs have spent considerably less time working in the system (5.5 years) and it seems that their current post is typically their first time in a management position as medians for time in current post and time in management are the same. Whereas DMOs, on average, have gone into management about three years after entry into the health field, DNOs and DEHOs have assumed management positions about ten or more years after

entry into the field. DHPOs have spent the longest time in their current post, a median of nine years, and DEHOs and DHSAs have also spent over six years in their current post (median of 7 and 6.5 years respectively) (Annex 2, Table 4). Differences in mean time in post between doctors (DHSS and DMOs) compared to all other DHMT positions were statistically significant as was time in the health field in-general, with doctors spending less time than non-doctors in each. However, differences in time in management positions were not statistically significantly different at the $p < 0.05$ level (Annex 2, Table 5). No statistically significant differences were found according to gender. This survey does not seem to indicate significant turnover of management staff, though DHSSs appear move around within the system more frequently than other DHMT positions.

4.5.1.1.C Official Designation of Posts

Survey respondents were asked whether they were in their positions in an official capacity or an acting capacity, as persons operating in roles in an acting capacity are often not as empowered to make important decisions. The survey found that 83% of respondents are officially in their roles, whereas 17% are acting. The central zone did not have any respondents in acting positions, while 23% of Northern zone respondents and 21% of Southern zone respondents were acting. Only four of nine DHMT positions had respondents in acting positions: DMOs (50%), DHSSs (33%), DHSAs (21%) and DHPOs (17%) (Annex 2, Table 6).

4.5.1.1.D Time Spent on Management

The survey also probed the extent to which doctors in management positions were engaged in clinical care. While clinical care is not part of DHSSs' job descriptions, it is expected

that DMOs will balance clinical and managerial responsibility. Nonetheless, given the limited number of doctors in the government health service, there is pressure for DHSSs to engage in clinical activities as well. Eighty-seven percent of doctors (with 31 of 32 DHSS and DMOs reporting) indicated that they had been engaged in clinical care in the last year either through government service or private practice. Thirty percent indicated that they spent half or more than half of their time providing direct clinical care, with more DMOs spending a significant amount of time on direct clinical care than DHSSs (Annex 2, Table 7).

All DHMT members were asked to indicate the approximate time they spent on management in the last year, while referencing various management activities such as planning; stakeholder engagement; supply and people management; supervision, quality control and monitoring, to name a few. Seventy-three percent of respondents indicated that they spent most of their time on management activities and only 8% indicated that they spent less than half of their time or very little time on management. Twenty-four percent of respondents said that they spent about half of their time on management. A third or more of several positions reported that they spent about half their time or less on management: DHPOs (50%), DHSAs (36%), DNOs (35%), DMOs (33%), Accountants (33%) (Annex 2, Table 8).

4.5.1.1.E Manager Selection and Continuity of Supply

Manager selection and continuity was probed qualitatively. Presently, management qualifications and management experience are not formally considered as part of the selection process for DHMT members or other sub-national management positions, such as facility in-charges. Recruitment for some of these positions, particularly for those occupied by medical doctors, such as DHSS and DMO, are made by direct appointment. As one interviewee noted:

“...most of the people that get into DHMT you are just appointed based on, 'Oh, this one's out.' You come in and take this role.” (Respondent #5 – DHMT) Though according to policy, DHSS team leader positions do not require a medical background, it is the practice to reserve these positions for medical doctors, who are often earlier in their careers than their staff.

“...like when the medical doctor graduates, at least in those days, they, they by default, became the district manager.” (Respondent 1 – National government)

“it's still like a national system that manages the recruitment and the DHSS are all linked up to the clinical director who thinks about career advancement and relocation for them.” (Respondent 17 – DHMT)

This was considered by one respondent to be a “retention mechanism” to ensure medical doctors remain in the public system. However, some DHMT members expressed frustration that there seems to be a double standard: *“Some positions within the DHMT are filled with just appointments whilst others are subjected to interviews. This demoralises other cadres within the system.” (DHMT survey respondent)*

Though presently management competence is not considered, the MoH does recognize the importance of cultivating these skills and aims to build a base of health workers trained in management to assume these roles. As a senior government representative noted, *“At this point in time, everybody just qualifies for any position, you know, which that's not what we want. We want to develop management as a career.” (Respondent 16 – National govt).* To do so stakeholders both noted the need to train up a cohort of managers and to enact a policy that establishes management training as a qualification for management positions.

4.5.1.2 Management Support Systems

The WHO framework includes functional management support systems as a critical enabler of management strengthening. It specifically mentions systems to support planning, finance, information sharing, human resource management, supervision, medicine and supply management. In Malawi, the MoH uses the DHIS2 health management information system platform; the iHRIS platform to manage workforce information; Open LMIS for medicine and supply management; an integrated financial management information system (IFMIS) to track finances and a system of communication circulars to communicate important policy guidance and other decisions. The survey asked DHMT members about these systems to better understand the extent to which they are functionally being used to support management.

DHMT members rated the extent to which they used various tools available to them differently. Whereas 80% indicated that they strongly agreed or agreed that they used communication tools regularly and 72% felt similarly about DHIS2, only 38% and 36% agreed that they regularly used iHRIS and IFMIS. Half indicated that they regularly used Open LMIS.

The regularity of use of these tools varied somewhat by DHMT position. For instance, DHIS2 was used regularly by the majority of DHMT members aside from accountants and pharmacists, but DEHOs and DNOs reported particularly regular use (100% and 86% respectively). As one might expect, the vast majority of pharmacists (89%) agreed that they regularly use Open LMIS. DHSSs (80%) and DMOs (83%) also report high regular use and the majority of DHSAs also use it, though 36% report strongly disagreeing that they did. However, DNOs report less regular use (40%) (Annex 2, Table 9).

The human resources information system, iHRIS, is most commonly used by DHSAs (62%), HRMOs (60%) and DNOs (56%). Fewer than half of all other cadres report regular use.

The IFMIS was reportedly least frequently used among DHMT members. It was noted in interviews that this system is more restrictive, with not all DHMT members having access rights. Notably 83% of accountants and 73% of DHSSs report regular use, with a bit more than half of DHSAs (57%) using IFMIS regularly (Annex 2, Table 9).

In interviews some respondents indicated that use of these tools, particularly IFMIS and Open LMIS, was difficult because the online systems were often slow or down entirely. Limited access, particularly to IFMIS, was also noted as an inhibitor to proper financial tracking for programme management among DHMT members.

4.5.1.3 Enabling Work Environment

For WHO, an enabling work environment encompasses a wide variety of factors. It considers the following areas: 1) policies, legislation, norms and standards which support the appropriate delegation of authority, 2) adequate support for managers (access to communication and supportive supervision), 3) incentives that encourage staff to go into management and for good management performance (including financial, non-financial, level of autonomy, learning, and recognition), and 4) accountability for performance. To this list, we add a fifth component on a cohesive team environment and a sixth on adequate financing. Under area one, policies that delegate authority were explored qualitatively with key informants. The DHMT survey inquired about the availability of job descriptions, the extent to which job descriptions are an accurate reflection of what DHMT members actually do and job clarity both upon initiation of current roles and presently. It also looked at perceived decision space among DHMT members. Under area two, this study qualitatively probed communication between DHMTs and the central MoH and supervision arrangements with local councils. Under area three the study assessed the

degree to which stakeholders perceived non-monetary incentives for performance to be valued and the extent to which DHMT members felt that these incentives were available to high performing DHMTs. Under the fourth area, accountability, the study examined the extent to which DHMTs reported various accountability systems to be functioning and perspectives on how to support the MoH's strategic game changer on performance management in its new HSSP III. The proposed sub-domain areas on team cohesion and financing emerged as important factors to consider in key informant interviews and in open-ended comments from the DHMT survey.

4.5.1.3.A Policies, Legislation, Norms and Standards

This study considered policies, norms and standards for DHMTs that related to both role clarity as well as functional decision space.

DHMT Job Descriptions and Role Clarity

Overall, 91% of DHMT members reported having and having seen their written job description. Twenty-four percent (5) of DNOs, 22% (2) of Pharmacists, 19% (3) of DMOs, and 7% (1) of DHSAs reported not having job descriptions (Annex 2, Table 10). While overall 69% of respondents indicated that they agreed or strongly agreed that they understood what was expected of them upon entry into management positions, the level of understanding varied by DHMT position type (Annex 2, Table 11). DHSS, DMO, pharmacists and DNOs reported more disagreement that they understood their roles upon entry and the median difference in understanding between doctors and nurses compared to all other cadres is statistically significant ($p = 0.004$).

In interviews, respondents noted that some DHMT members may not have a clear understanding of how to operate in their roles due to a lack of orientation to their jobs; multiple unclear or unspecified job descriptions; lack of management training and a limited understanding of public service regulations and how to apply them. One respondent highlighted the importance of understanding public service regulations to aid in management action: *“...like the DHSSs when they go into the districts, they find themselves in trouble because they don't know the public service regulations. I mean, it's not like they don't know their job, right. But, you know, just the policy framework within government. How do you handle someone who has been absent for five weeks, for instance? What... how do you handle that? How do you handle all these cases.”* (Respondent 14, Non-government) Other respondents indicated that they have multiple and sometimes conflicting job descriptions from local government and the MoH and that the MoH job descriptions were still draft and not fully codified. Further, current official job descriptions were referred to as expressing what informants considered their former positions, as senior technicians, rather than as a managers. This may be in part due to transitioning expectations of accountability and roles under the more recent devolutionary efforts. One respondent expressed that there is still a lack of clarity around the amount of time that should be dedicated to management and the amount which should be spent on service delivery, though it is gradually improving: *“..they could say DHMT, but there were no specific roles for the DHMT in terms of management roles. Because like myself, when I was coming as a manager in terms of DHMT member, I was going there as a technical person in terms of the nursing and midwifery office. However, the percentage of the management role that I would be performing in the DHMT was not stipulated. So the management would expect me to perform management roles at the same*

time professionally, they expect me to do nursing and midwifery roles. So there was that conflict.” (Respondent 17 – DHMT)

This conflict affects DHMT members in more than one way. Not only is there some uncertainty about their supervisors’ expectations, but also they feel their supervisees don’t understand their new management roles and that they are shirking their responsibilities, which they felt put significant pressure on them: *“The [CADRE] is out there, they expect me to be all the time in the field. They take me as a field worker. When I’m in the office, they just think I’m just sitting there, doing nothing. Yeah. But when I tell them that I need to plan.. I.. It’s like I’m representing the ministry in the policy.. in the implementation of the policy. They will not understand. What is policy implementation? They will not understand. Because there’s a lot of thought that has to go into policy implementation for it to work. So that you have already said, that disconnect is there between us as managers and the people that I’m representing who are the [CADRE].” (Respondent 18 – DHMT)*

In order to clarify expectations with managers and the broader set of health workers with whom DHMT members work, they suggested there is need for one job description that is jointly developed by all relevant stakeholders (local government, MoH, DHMT members) and formalized in a policy that can be shared. It was noted that the expected level of effort on management and service delivery tasks should be articulated and that these job descriptions could be officially circulated as a booklet, as is the practice with other positions.

Respondents were also asked to what extent they understood what is expected of them in their current role now. This study found a statistically significant improvement in median understanding among all DHMT members ($p = 0.00$). However, there is still a substantial proportion of DHSSs (33%) who report strongly disagreeing that they understand what is

expected of them. Some pharmacists (22%) and DNOs (14%) also feel similarly (Annex 2, Table 12). There is no statistically significant difference in reported understanding of expectations according to how long DHMT members have been in their current post, in management positions or in the health field.

Most DHMT members report that their job description reflects what they actually do as managers (69% strongly agree or agree). However, some positions felt less strongly about this. 64% of DMOs report strongly disagreeing, disagreeing or neither agreeing nor disagreeing that their job descriptions reflect their roles in practice. 47% of DHSS and 43% of pharmacists feel this way as well (Annex 2, Table 13).

DHMT Decision Space

The decentralization process in Malawi continues to gradually unfold, shifting the locus of authority from the central government to district councils and DHMTs in the health sector. While policy now favors devolution, shifting of administrative and political authority to local government, in practice this change is playing out in different ways and influenced by historical practice as well as financing dynamics⁴³. As proposed by Bossert, decision space refers to “*the range of effective choice that is allowed by central authorities to be used by local authorities.*”¹⁴³

In the survey, DHMT members were asked to assess their level of authority as a DHMT to make decisions about health system management in their districts, considering the potential influence of national-level actors, local government and NGOs in the last year. Most respondents (58%) felt that they had much or a great deal of authority to make decisions. Notably, the DHSSs, who function as the team lead and ultimate decision makers for DHMTs,

were less optimistic with only 34% suggesting that they had this level of authority. The most common response among DHSSs was that they had some (53%) authority (Annex 2, Table 14).

In interviews, managers noted constraints on their decision space and, in particular, highlighted significant limitations in terms of funding, human resource, and supply management.

As noted by one DHMT member:

“One thing that I've noticed is that, um, though we are talking of decentralization, but it, this hasn't really been completely rolled out. Because as managers at district level, local level, we are like, um, sometimes, you know, uh, not able to, you know, make certain decisions because, uh, those decisions have to be made at central level. Okay. For instance. Talk of recruitment. Okay. Um. We are limited. We. We can only recruit certain cadres. Okay. Other cadres have to be recruited from central level. So I think if they could free up that space, so much the better. Because we know our needs as... managers. We know our needs.” (Respondent 10 – DHMT)

Managers felt similarly about central level control of supplies and funding. One manager spoke of limited control of a significant amount of funding being directed through NGOs:

“It's a national issue that we know that the funding is not usually as enough. However, I think the lack of control over some of the funding that comes is what also makes it difficult for us to work properly. To give an example where you know, at least now it's a little better, but maybe four or five years ago you would find that about 25% of the funding was coming from government and about 70 coming from the donors. But we don't really have much control over those funds. We know a little bit that we are at around 50, 58% coming in from donors. But now you find that that huge sum of money, you do not really have much control on where you think you can work best. So they do come with sort of prescribed, prescribed ways to use the funds. Yet you have several other needs, but you can't use the funds for the other areas. So it's a factor that I think does affect us a lot because the resources might be there, but you do not really have control to make a decision on what to use those funds for. So I think that's an area that I think makes it quite difficult. Um, makes it quite difficult.” (Respondent 7 – DHMT)

Managers were eager to have more control on these matters through policy shifts that supported sub-national human resource management and more direct funding of government by donors and collaborative development of grant proposals, such that government priorities were better reflected.

4.E.1.3.B Support for Managers

DHMT members reported frequent formal and in-formal check-ins with their supervisors overall. DHSS are supervised by the district commissioner, whereas all other DHMT members report to the DHSS. Eighty percent of DHSSs reported checking in with their supervisors quarterly or more frequently and 67% of all other DHMT members indicated the same. Nevertheless 13% of both groups report checking in with the supervisors almost never (Annex 2, Table 15). Both groups seem to value check-ins and believe they help them perform their jobs better, with 85% of all DHMT members either agreeing or strongly agreeing with this sentiment. This opinion was particularly strong among DHSS (93%) (Annex 2, Table 16). There was no statistically significant relationship between time in management and agreement that check-ins with supervisors are helpful. In addition to consultations with line managers, most DHMT members (85%) reported seeking support from peers through informal and formal methods, with little variation by DHMT position type or zone (Annex 2, Tables 17 & 18).

In addition to communication with direct supervisors, DHMT informants discussed a desire to have a stronger relationship with the central MoH. During times of emergency, coordination between the national-level and district-level was reportedly enhanced, though some respondents noted that emergencies tested decentralized arrangements. Several DHMT members suggested that they would appreciate additional support from the national-level during non-emergency times and they believed this kind of collaboration could help boost their performance:

“But I think the collaboration can be strengthened. It can be better. Um, to... I think there needs to be a lot more initiation of forums, not just, okay, when there are issues where you're talking to people at, at central level, that is access to the PS [permanent secretary], to the Chief of Health Services. Um, but where we are, um, there's a more intentional collaboration with them. Um, whereas managers you, you share, you're able to share challenges, you're able to... Because what I'm trying to say is most of the time

the only, most of the times the only times where you're able to collaborate is when you're, you're faced with an emergency. But um, where you are constantly, you have discussions, meetings with them at a constant. I think that's a good way to strengthen. Um, yeah. When you strengthen that relationship in that manner, it's, it's easy to handle a lot of issues and challenges, ... It would be much easier.” (Respondent 5 – DHMT)

“I know they may not have the resources, but I would appreciate if once in a while, not only when they have a new software for supervision, then they come to do the trainings. Even without the trainings, just coming to do the monitoring. If they are planning on a quarterly basis, let that be the case. On a quarterly basis, they come and then visit the management teams. Because if you are not coming. Well, what I've seen, most of us, we do relax, although we know we are supposed to work. But for that directorate to be coming at least monitoring some of the issues that we are doing, it will actually boost our performance.” (Respondent 9—DHMT)

Informants also highlighted the importance of cultivating strong relationships with local councils to ensure the effective funding and roll out of health plans at the sub-national level. Yet, there was also the recognition that these structures require further strengthening to be effective: *“I think what I can say is that there's a lot which needs to be done in order to strengthen the leadership in the councils.... We are trying to address the leadership issue on the health sector part, but the set up at the district goes beyond that ... So I think this is something which, as we are working on how we can improve on the health sector, we also have to see on how we can assist the councils to make sure that this is something which is being addressed as a whole, not just for one sector.” (Respondent 2 – National government)* While acknowledging their import, several DHMT members also expressed some wariness of local councils, feeling their engagement was at times counter-productive: *“But sometimes you see the type of approach they take when they want to do their oversight work is as if they want to go so into the technical work, and that also does affect the performance. You would not be able to perform according to what you are capable of doing just because you are afraid of these people. You know they would*

want to interfere with your work. That also does affect the performance within the environment.”
(Respondent 7 – DHMT)

4.5.1.3.C Incentives

Monetary and non-monetary incentives can both encourage health workers to seek management positions and motivate performance while in management. This study inquired about whether management positions are considered desirable, whether DHMT members perceive non-monetary incentives to accrue to high performing DHMTs, the extent to which DHMTs are satisfied with their positions and factors associated with career progression. Overall, DHMT members from all position types agree that DHMT positions are considered desirable jobs within the Malawi health service (76% strongly agree or agree) (Annex 2, Table 19). Nonetheless, most DHMT members also report being dissatisfied with their jobs (80% report either being very dissatisfied, dissatisfied or neither satisfied nor dissatisfied) (Annex 2, Table 20). As one survey respondent noted, *“Being a manager is stressful, less rewarding and not that motivating. This makes it less desirable considering the sacrifices and tough decisions that need to be made in the process.”* Other respondents noted limited opportunity for growth through career progression as a demotivating factor. Levels of dissatisfaction (including being neither satisfied nor dissatisfied) are particularly high among DMOs (100%) and DNOs (95%), but there is no statistically significant difference in level of satisfaction between clinicians (doctors and nurses) and non-clinicians.

To get a better sense of whether DHMTs perceive performance to be linked to non-monetary incentives, DHMT members were asked about how likely it is for high performing DHMTs to have access to the following incentives: increased health budget, public recognition

of good performance, career advancement opportunities, learning opportunities and decision-making independence. There was not clear agreement on this question, with answers falling across the spectrum. The incentive that the most DHMT members agreed high performing DHMTs were very likely or somewhat likely to have access to was decision making independence (66%), followed by learning opportunities (56%), and recognition (55%). DHMTs believed increased budget (48% very unlikely, somewhat unlikely or neither likely nor unlikely) and career advancement (45% very unlikely, somewhat unlikely or neither likely nor unlikely) was less likely (Annex 2, Table 21).

Career progression opportunities linked to performance on-the-job can be a powerful motivator. This survey explored factors believed to be associated with career advancement. Health worker cadre was the factor that the most DHMT members strongly agreed or agreed was linked to career advancement (66%). The majority of DHMT members also believed personal connections play a role (61%). DHMT members were split on whether job performance was linked to career advancement with 39% agreeing, 47% disagreeing and 14% remaining neutral (Annex 2, Table 22). The majority of DHMT members disagreed that gender was linked to career advancement, with women being slightly more likely to disagree that gender is linked to advancement ($p=0.489$). It is not clear if the term “gender” was interpreted to mean either gender or to mean females specifically.

While DHMT members were mixed as to whether job performance has a bearing on career advancement, in interviews key informants widely criticized the official performance management system as being broken, a characterization endorsed by senior government officials. The recently released HSSP III has prioritized this as a major game changing reform for the next five years and there are active plans underway in the MoH Human Resources Department to

overhaul the performance management system (more on this topic is included in section 4.4.4). Nevertheless, it will take time for a functional system to take hold in such a manner that it can be used to incent performance. In the absence of this, some informants felt even small tokens of appreciation, such as enhanced recognition could be useful. *“People don't need much, okay. You need to recognize them to say, okay, okay, for instance, best clinician. And then you put them on the wall. You see something like that. And people look at him, Ay, this is the best performing clinician. You know, issues like those. And then those people get motivated and someone sees that, they will say, okay, let me think seriously, work on my, my issues so that maybe I can I can be recognized as well.”* (Respondent 10 – DHMT) However, there is no clear manner in which the government recommends motivating staff and as such it is not systematically considered: *“The government system as, uh, as a system on paper, yes, we do have a motivation. We recommend, we encourage motivation. But we did not get clear guidelines on, on the rewards at the end of the performance appraisal, at the end of the measurement of your performance, we are not very clear on what kind of rewards or what kind of motivation you know can be provided. So it's up to the managers to actually find ways on how to motivate their staff.”* (Respondent 3 – National government)

4.5.1.3.D Accountability for Performance

To assess the extent to which DHMTs are held accountable for performance, they were asked about whether several tools or mechanisms had been used to assess their performance in the last year. The local authority performance assessment, which aims to assess performance of local government in a wide range of areas, including service delivery, was reportedly used in the last year according to the vast majority of respondents (90%). The DHMT supervision tool, a

tool developed by the MoH QMD and administered by zonal coordinators, was the second most commonly reported tool in use (79%). The District Implementation Plan Action Tracker, designed to assess the extent to which annual health implementation plans are rolled out on a quarterly basis, was reportedly active according to a little more than half of respondents. Individual performance assessments are not as commonly in use (32% reported they were used in the last year) (Annex 2, Table 23).

As noted in the section on incentives, the government's performance management system, a primary mechanism for ensuring individual accountability, is currently not regularly used but is a priority area of investment for the MoH in the coming financial year. It was widely suggested that managers and staff up and down the system put little stock in this system presently. *"As a government, I think we are not very serious about this,"* (Respondent 1 – national government) indicated one respondent. While some technical issues were raised such as the use of an overly complicated rating scale at one point in time and multiple revisions of assessment tools, many challenges are much more systemic and several respondents referred to the system as having "collapsed" and widespread disinterest in implementing it. One tension that arose was the view that performance appraisal should be linked to some tangible outcome, but that the government has limited fiscal space to support this:

"I think we are taking it very lightly. Maybe people know that even if they appraise you, you're not going to get anything from that appraisal." (Respondent 9 – DHMT)

So when we say, okay, appraisal will be, you know, attached to your, you know, your promotion, we should also make sure that people get promoted. Yes. Otherwise, if I get appraised, I don't get promoted. Sometimes I don't see the importance of, you know. Yeah. Of getting .. going through that, you know, appraisal process. (Respondent 10 – DHMT)

Do we have the finances to promote, you know, a hundred people under the Ministry of Health? Do you have the funds for that? That has to go into the budget. (Respondent 3 – National government)

One respondent suggested that managers may feel conflicted about using such a system, because performance assessments might be contested based on lack of adequate inputs to successfully carry out workplans: “...Usually, it has to do with the resources that are available. You are looking at the someone setting the objectives and then on the assumptions, usually people actually say 'if I have the resources, I'll be able to do that.' And then... And then the management doesn't provide the resources for that...If someone performs badly during the appraisal, you still come back in my assumptions I said if you give me the resources, I'll be able to achieve this. But you did not give me the resources....So the issue of resources is also a very big issue.” (Respondent 9 – DHMT) Another felt that providing constructive feedback is perhaps uncomfortable culturally and so it may be avoided: “Another practical issue that I've heard quite a lot about is that people are afraid to give honest performance reviews... I think where people tend to be very, very polite and, you know, wouldn't want to do anything that would like, you know, maybe undercut someone or like block them from advancing....” (Respondent 4 – Non-govt)

In addition, there seems to be ambiguity about who has the power to sanction non-performing staff. DHMT members widely cited their inability to directly address non-performance as a major constraint to performance improvement, but national-level MoH actors suggested that sanctions are provided for in relevant regulations. Given the more recent devolutionary changes, there may be need to clarify how staff sanctioning should be managed within the system and review policies and legal frameworks to ensure they are aligned with a

more prominent role for district councils in these matters. One respondent summed up the current ambiguity as:

“We haven't just allowed. I don't know, it's almost like it's just been left there because, you know, like, it's clear that the district commissioner is a controlling officer, but for some reason they haven't been in practice. They haven't been given, been given the authority or maybe, maybe it's not they haven't been given... Or maybe they're not exercising their authority over resources like staff as well, because for finances, they're controlling officer. But for the staff, the DC want discipline someone at their level because the DC should be able to discipline anyone at the district level, but either they haven't been given or they haven't taken, they haven't stepped up.” (Respondent 1, national govt).

4.5.1.3.E Management Team Cohesion

Team cohesion and a teamwork orientation among management teams members is important when pursuing shared objectives. In Malawi, a sense of collective leadership to work towards public health aims seems to be emergent but also somewhat hamstrung by a strong sense of professional hierarchy. As with most organizational structures, there is a clear team leader of DHMTs, the DHSS, which is almost always a medical doctor – the highest-ranking profession in the health field. To foster a strong sense of teamwork, it may be important to recognize and attempt to diffuse this professional asymmetry to create a space for more open dialogue, collective problem solving and a stronger sense of team¹⁴⁴. Some refer for the need for team leaders to shift their approach from “cop to coach” to facilitate this process¹⁴⁵.

Presently, this study suggests that there is an overwhelming sense of frustration with DHMT team dynamics. This seems to be driven by two key elements. First, DHMT team members express that professional silos constrain collective action and that non-medical team members' opinions are not always fully respected:

“In most cases you find most of the managers tend to defend their department instead of coming up with issues. When you come to allocations, someone will actually try to defend

his department other than coming as a team, we have one objective to achieve. What do we do? Let's do this, this, this. They will always come with a mind that no first my department, others, they should come behind me.” (Respondent 9 – DHMT)

“If you look at the management itself, usually the final decision comes from the DHSS, which means in terms of giving space to others, that one that one is not given. As a management, you are supposed to come up with a decision as a management, but in most cases you find that say, no, DHSS who makes the final decision.” (Respondent 17 – DHMT)

Competition within the team may be driven in part by pressure from below where health workers do not fully appreciate a broader manager role and instead view district managers as the representatives and advocates for their cadre.

“Because I when I'm somewhere, that means I'm representing them and advocating for that..the same department. I think the voice whatsoever because like I am the consultant of that department to the management.” (Respondent 17 – DHMT)

“Its like some managers receive pressure from their subordinates. 'You are not helping us. You just sit in the management.' [Laughs] So they want to [unclear] out and make sure that the little resources that are there, they are allocated to them.” (Respondent 9 – DHMT)

The second issue that arose was exasperation that DHSS positions are not competitive in a context where there are few routes for further career progression for non-medical doctor managers. This circumstance is exacerbated by the fact that medical doctors often have fewer years of experience than many of their non-medical doctor colleagues. *“The use of medical officers as fit for DHSS position is one factor affecting the performance of DHMTs as most of the medical officers have little experience in management and the health system in general and yet they are expected to lead a team of managers. DHSS should be open to any DHMT member through a competitive process of appointment.” (DHMT member survey response)*

4.5.1.3.F Adequate Financing

Ensuring the availability of adequate financing to support PHC is recognized globally as a critical priority in need of government and donor action. In Malawi, one of the least developed countries globally, with only U.S. \$21 per capita spent on PHC in 2020, objectively has quite limited resourcing. In 2020, 36% of current health expenditure was from government sources, with donor financing and out-of-pocket expenditure from the population contributing significant shares¹⁴⁶. Constraints on financing were widely cited as a primary enabling environment factor constraining health system performance at the district-level. As one DHMT commented through the survey: *“The budget that DHMT are expected to work on to deliver health services or indeed improve the health of our communities is by far not enough. The DHMT are at times seen not to perform because we struggle with resource. You work on a budget which is heavily underfunded. Most of the resources go to utilities in the hospital and you cannot reach out to the public with simple public health approaches.”* (DHMT member survey response) Another informant further articulated the primacy of this concern: *“Finance is the number one. It's the first thing. We never have enough money, so that influences our performance quite a bit, you know, quite a lot, actually. Quite a lot, because there's so much more we could have been doing. But we're failing to do because we don't have the money to do.”* (Respondent 5 – DHMT)

4.5.1.4 Manager Priorities

Managers were also asked about how they perceive further investment in health management strengthening compared to other priorities in the health sector as well as which specific management areas require further strengthening. Overall, 74% of managers indicated

that investment in health management strengthening was very important and 26% said it was somewhat important. There was little variation by zone. Nine specific management investment areas were queried, all of which were broadly considered important. 91% of managers indicated that they agreed or strongly agreed with investment in health management systems and tools improvement. Investment in career tracking; performance assessment; on-the-job coaching; in-service management training; clear job descriptions; standards for hiring managers; and peer support were all agreed with or strongly agreed with by over 80% of managers. The only area that fell slightly short of the 80% mark was the inclusion of more pre-service training in health management (78%) (Annex 2, Table 24).

4.5.1.5 Summary Findings and Discussion

Under the first domain—the availability of health managers—this study identified that while there may be some gaps in certain DHMTs, particularly among pharmacists and accountants, management teams are fairly-well staffed. Sixty-nine percent of DHMT members also report spending most or all of their time on management. This can likely be reinforced through better articulation of formal job descriptions, particularly for clinician-managers, who may face pressure to be active in the hospital wards. Though staff turnover in the health sector is reportedly high, this study found that most health managers have been in their positions for a median of four years and in health management roles for longer, suggesting stability. However, it appears that it is common practice to appoint DHSS and DMO positions on an acting basis (50% of DMOs and 33% of DHSS are acting), which can constrain their influence and authority. Given the significance of these positions to DHMTs, it would be advantageous to determine how to regularize more of these appointments.

The second domain on management support systems was assessed by managers as one of the most important priorities for further management investment (91% agreeing or strongly agreeing). Management systems and tools can simplify management tasks if well understood, accessible and easy to use. Most of the various information management tools in Malawi (DHIS2, LMIS, iHRIS and IFMIS) are online. This requires ensuring access rights or regular printing of reports for DHMT members, training on use and the stability of internet technology systems. While DHIS2 has achieved high penetration among the various team members, the other systems are either not as accessible or not as well understood. Broadening access and demonstrating the utility of these tools to management tasks and routines, may require some reinforcement.

The third domain, the enabling environment, is arguably the most wide-ranging and complex domain to tackle as it incorporates a plethora of systemic factors, that often require significant reform efforts. This study explored job clarity, manager support systems, incentives, accountability systems, team cohesion and the broader financing environment. Several dynamics emerged for the L&MSC consideration. First, while recent steps to further devolve powers to the district-level are advancing, concomitant changes in DHMT roles have not been formally expressed in broadly accepted job descriptions. DHMT members signaled that there may be different expectations for their work from local councils and the MoH. This lack of clarity extends down the system, where the broader health work force is not fully apprised of the role of the DHMT, creating misaligned expectations, pressure on DHMT members and frustration. This apparent conflict between DHMT members' roles as members of a collective management group and advocates for their professional cadre can distort decision making and contribute to individual stress and team dysfunction, which may underlie high levels of reported

dissatisfaction with DHMT jobs (80% report lack of satisfaction). Revisiting job descriptions with all key stakeholders to ensure mutual agreement on roles and alignment with human resource policies and norms could go a long way in empowering DHMT members to take on the difficult task of changing entrenched patterns of work to embrace relatively new management functions. Job descriptions should specifically indicate the level of effort to spend on management, as compared to direct service delivery, for relevant professions and include performance metrics, which can be linked to a more robust performance management system. Making this clear, should also help “hybrid managers” address role and identity transition from front-line worker to manager, which can prove challenging without adequate support⁸⁵. This may be particularly true for clinicians, who reported high levels of misunderstanding of management job expectations upon entry into positions. Further, making DHMT performance metrics clear may help structure discussion and performance appraisals with local councils, who increasingly seek to play an oversight role, but may not be fully fluent in health programming.

The companion issues of accountability, incentives and career tracking were much discussed topics among key informants at both national and sub-national-levels. Almost half of DHMT members felt that job performance had little effect on career growth, perhaps in part because there is presently no trusted means of evaluating individual and team performance. Despite multiple tools in circulation, none are fully scaled and only 32% of DHMT members reported using the individual performance management system in the last year. Linking performance appraisal to tangible outcomes, good and bad, was seen as critical to reinvigorating the system. But, neither a system of rewards nor sanctions is currently in force. Promotions for non-medical doctors, in particular, are rare as demonstrated by the median length of time in current posts for some cadre: 7 years for DEHOs and 9 years for DHPOs. Promotions also have

financial implications, which may be difficult to address given fiscal constraints. But DHMT informants felt that even non-monetary incentives, such as recognition, learning opportunities and greater autonomy, would be appreciated as a way of valuing hard work. The MoH should also consider building on and reinforcing the practice of regular check-ins with managers as part of the performance management cycle, which 85% of managers reported as useful to their work. Lack of sanctions for non-performance was repeatedly specified as a major constraint to district performance and is an area where regulation is not necessarily clear and managers do not feel empowered to act. Ministry of Health efforts to regularize performance management under the new HSSP, should incorporate clear guidance on systems for recognizing superior performance and addressing underperformance, which may require clarifying or resolving policy and legal frameworks inconsistencies.

Lastly, the financing environment was repeatedly offered as a primary constraint to sub-national decision space and performance. While good management is arguably more important in resource constrained environments to ensure optimal efficiency, some degree of flexibility is required for teams to perform. Both limited investment in PHC overall and significant flows of donor funds with pre-determined use and challenging financial management requirements constrain government efforts to devolve decision making authority to local officials. Building on and expanding basket funding approaches that engage district governments in resource allocation and monitoring could help build stronger sub-national financial management systems over time and encourage greater direct investment.

4.5.2 Part II: Health Management Professionalization Pathway

Part two explores the context for health management strengthening efforts in Malawi through the application of Linnander and colleagues' five themes for a health management professionalization pathway: 1) demand for management expertise, 2) national policy framework, 3) standards and monitoring, 4) educational path and 5) professional associations. Findings are summarized by theme and summary conclusions are offered at the end.

4.5.2.1 Demand for Management Expertise

Linnander et al's first proposed theme along the health management professionalization pathway, is that health management expertise is genuinely demanded by a country. Malawi's second national five-year health HSSP (2017-2022) emphasized the importance of leadership and governance strengthening to achieve population health goals. As part of this plan, it intended to strengthen leadership and management functions and structures at all levels of the health system by enhancing capacities of staff in these areas¹⁴⁷. Concurrently, quality of care also became a major national health priority and stronger leadership, management and accountability was viewed as an important vehicle for achieving this aim by the MoH QMD, newly established in 2016¹⁴⁸. In 2023, a subsequent national HSSP III (2023-2030) launched and included "enhancing the effectiveness of leadership and governance at all levels" as one of nine objectives. The strategy specifically prioritizes eleven "game changing" reforms. While general management strengthening is not explicitly among them, enhancing performance management and governance are featured.

Government demand for management competence in the health sector, as expressed in policy and plans, was confirmed by national and sub-national government informants as well as

those outside of government. As one national government informant expressed: *“Yes, the demand for health management is there. And actually, in most of our policy documents I think the issue of weak leadership and management, I think, has been noticed as one of the major challenges, in terms of the management of health care services across. So, that gap was made, that this demand is there so that we should have health management as one of the key areas to improve... So the demand is really there and is very high.”* (Respondent 19 – national government) Several informants expressed that while health management had been acknowledged as important for some time, in practice, it is something that has been taken more seriously recently. They attributed this to the increasing frequency of adverse events and circumstances, such as rising inflation and protracted health emergencies like Covid-19 and cholera.

“We have, um, uh, issues of, you know, um, devaluation, you know, inflation and all these things actually put a strain on our few resources already. And this calls for a manager to think really critically on how to go about managing these resources. So we are having, actually having, more challenges now than before.” (Respondent 10 – DHMT)

“I definitely think it's still demanded 100%. ...Obviously now more so. We've had COVID and now cholera and I mean, I don't know when it ever isn't demanded, but I think we definitely need this.” (Respondent 11 – Non-government)

At the DHMT-level, informants acknowledged greater efforts to articulate the managerial roles of DHMTs that are distinct from clinical care and investments in training. However, they also indicated that while management is appreciated among policy makers and managers, other health workers do not necessarily value this function, perhaps because they do not see its impact. *“I'd say it's important, though, from people below. They do not, do not much appreciate,”* (Informant 9 – DHMT) said one DHMT informant. One senior informant relayed that while management strengthening was a chief priority in his department and he and his colleagues

would like to develop management as a career track within the ministry that this would require a culture shift, yet to be realized, and would take time and resources to cultivate.

4.5.2.2 National Policy Framework

According to Linnander and colleagues, a second facet of health management professionalization is the development of a national framework or cluster of policies that provide better definition for management roles and help attract and retain management expertise. In the case studies they explored, the need for stronger hospital management drove professionalization efforts. In Malawi, efforts are underway to upskill existing staff in both hospital management and district-level PHC health systems management¹⁴⁹. However, there is no defined policy, strategy or action plan for doing this other than what is expressed in the 2017 Quality Management Policy for the Health Sector, which does not go into detail. This was confirmed by key informants: *“So maybe, even myself, maybe I missed it. Okay. Because we have a health indicator handbook. I know we have that one. So I was trying to figure out, do we have a health management blueprint? No, I don't think so. I've never seen it.” (Respondent 18 – DHMT)*

Health management positions, such as posts in DHMTs and senior-level hospital management, feature in the MoH human resource structure and there has been ongoing work to update job descriptions to reflect managerial responsibilities. Lower-level managerial positions, such as those of facility in-charges or in-charges of hospital departments, do not feature as designated management positions in the official structure. Instead, they are expressed as clinical positions. Presently no sub-national health management positions require specific qualifications, training or experience in health management. Only professional qualifications in the health sciences – such as a degree in medicine, nursing or environmental health—are considered when

hiring. *“For example, ... you just see who is, who is there and appoint to say ‘you be in-charge’, maybe depending on the experience and so on. But it's not like an established post. It's a nurse. The role is a nurse or the role is a clinician. But you have given this person this added task to lead the colleagues in the department. So you find that in the in the establishment you will not find that actual, that actual post.” (Respondent 19 – National govt)*

This has several implications. First, there is no path to entry in the government health service for those who do have health management qualifications (which exist in Malawi), because they are not recognized in the formal establishment. This circumstance coupled with the practice of appointing staff to managerial positions without a formal hiring process means that candidates with management credentials are not considered for potentially relevant positions. This includes health workers who enter the health service with a clinical qualification, return to university to pursue a management degree, and re-enter the health service: *“Yeah, because this is a secondary qualification [management degree].. The primary qualification is what made you to be recruited in the first place. So I have a maybe a diploma in clinical medicine, a degree in medicine. That's the primary required qualification. So if this [management degree] is being provided, it is a secondary qualification, so it might not really determine your promotion to that level. Okay. Yeah. So I think in in the government system, that would not be.. that would not work really.” (Respondent 3 – National govt)* This devalues management degrees in the public sector and results in health management graduates pursuing careers in the private not-for-profit and research sectors instead.

Second, health workers who receive in-service training in health management encounter a glass ceiling due to limited opportunities for advancement on a management trajectory for nonmedical doctors, causing frustration. This was often described as Malawi's embrace of a

“medical model:” *“The medical model. So that is linked towards more technical than management. But here we are talking about management, not the technical aspects. So what it means is. I am [non-medical cadre], but I can also be a manager.... I think the whole of this is emanating from that fact that we use the medical model here in Malawi. So because of that, myself, himself, and if you are not in that cadre [medical doctor], it's very difficult. (Respondent 18 – DHMT)*

In practice, there is some inconsistency in the government’s position with respect to management. While the MoH regards it as a priority, it has yet to make attendant policy changes to encourage qualifications in health management or to clarify roles for non-physician managers. Though the need for a policy on health management is well acknowledged by those within and outside the MoH, this process will require broad consultation, careful planning and change management. Presently, the MoH is working to develop a critical mass of managers who would qualify under such a policy by aiming to train all DHMT managers nationally. However, it will also need to grapple with how management in-service and pre-service qualifications are regarded vis-à-vis other health science qualifications and how this translates into civil service staffing grades, which may have implications for the prevailing hierarchy in the health system. For example, how would a non-physician qualified manager measure up to a doctor with no management training? Perspectives on these questions were mixed, with some informants open to and even advocating for considering roles for non-physicians in management and others suggesting this would not be acceptable:

“And I feel, for example, in the medical profession, that guy is a clinical officer and has gone into bachelors in management and he meets a doctor with MBBS. They won’t match... They won't match. Though he has the management capacity to manage this doctor, but they won’t match. This doctor was to look down..... The best thing is to move into that career and have this [management qualification] as the butter on the bread. It should be butter on the bread. Not bread itself... You know, when I was doing my

masters, the teacher said we have different background professions here. It depends. This is, this is butter. What we are giving you is butter here. Eh-heh. So it depends what type of bread. Some, this course will shift them high, but some it will just be nothing because of the bread they have.” (Respondent 16- National government)

Given the dominance of doctors in the current hierarchy and in positions of influence in the MoH, creating a management pathway for non-physicians, would likely require companion changes to offer new avenues for advancement for medical doctors, who will likely resist managerial reforms that could impinge on their position at the apex of the professional hierarchy. As one respondent noted: *“Can we possibly create career progression path that, uh, will allow the medical doctor to go as far as they can go without necessarily being the manager? If they’re not.. if they don’t have the qualification? I think that’s the most critical change that needs to happen.” (Respondent 1 – National government)*

At present, medical doctors can become managers or pursue clinical specialization to advance professionally, though specialized positions are few and result in doctors being clustered in tertiary hospitals in a few locations. Generalist positions, posted throughout the country, that have the potential to achieve similar rank could allow doctors to more easily remain clinicians without diminishing their status. In a country with among the fewest doctors per capita globally (0.49 per 10,000)¹⁵⁰, this could help serve the dual aim of maintaining more highly skilled clinical resources in patient care settings and bolstering the motivation of other health cadres by opening up career progression options.

This type of change would not come easily and would require a deep commitment to working with all involved to shift the current culture within the field. For example, while medical professionals may resist attenuating their de facto claim to management positions, so too non-medical cadres may object to those in their ranks assuming more managerial roles or shifting entirely into different professional areas. Some key informants referenced some MoH

directorates being less than enthusiastic about what they consider as their professionals making these changes. The culture of respecting the clinical professions, is reportedly very strong in Malawi.

4.5.2.3 Standards and Monitoring of Health Management

Linnander and colleagues' third suggested theme on the pathway to health management professionalization is the articulation of standards and monitoring systems to assess compliance with good management practices. In their study, these standards were related to the quality assurance of hospitals. In Malawi, the Quality Management Policy of 2017 called for the establishment of client safety standards and for systems to monitor compliance with health quality standards¹⁴⁸. At the time of writing, the MoH QMD had recently finished developing its own national quality of care standards and was rolling them out. These standards include a component on health management in addition to clinical care. The MoH was planning to implement an annual national assessment process to gauge health facility and hospital compliance with these standards, which could provide a useful benchmark for reviewing practice.

In addition, there have been multiple attempts to establish standards and monitoring systems for DHMTs, among them a DHMT supervision checklist development by the MoH QMD; a Local Authority Performance Assessment Tool that reviews local government performance overall, including service delivery; the Detailed Implementation Plan Action Tracker that monitors the extent to which district action plans are rolled out and potentially other implementing partner initiatives. Though informants identified these tools, many were referred to as being inconsistently used and project-driven:

“Yes, I think I've seen it since 2014, 2012. We have had it. I think it's like project driven. The same, I think this, but when that project goes, everything goes. Because like we have no document guiding us and probably continuation.” (Respondent 17 – DHMT)

“They are supposed to do it, I suppose, on a quarterly basis [referring to DHMT supervision tool]. But I remember they came some time back and since I started the managerial roles, I remember only them coming twice in the in the seven years. Seven years. Yeah. Okay coming twice, I remember.” (Respondent 9 – DHMT)

Though there have been intermittent attempts to assess organizational unit performance, individual performance appraisal is currently dysfunctional, with low levels of participation. This is widely recognized as a gap and a priority area for the MoH under its new HSSP (2023-2030). As the Ministry’s focus sharpens on performance, it will be advantageous to determine how to draw linkages between efforts to enforce quality standards, to assess management performance and to link outcomes to the individual performance appraisal process. Further, exploring the role of medical and nursing regulatory councils, bodies that govern standards and licensure for these professions, may also be important when codifying clear management standards.

4.5.2.4 Educational Path

The development of a graduate-level path for health management training is a hallmark of the professionalization process. Kamuzu University of Health Sciences, the main institution training health professionals in Malawi, offers both a Bachelor of Science in Health Management and a Master of Business Administration in Health Systems Management. One key informant noted that most other health science degrees at Kamuzu University also include a management component. However, as raised with respect to a national framework, the university’s efforts to develop a pipeline of health managers has not been harmonized with MoH hiring practices: “At

first, before they introduced the bachelor's degree. I was telling them bachelor's degree in health management is a bit difficult for health professionals to get. You understand, eh? Because what I was telling.. What I was telling the college is that once a person has qualified as a bachelors in health management, he has no proper position in the Ministry of Health.”

(Respondent 16 – National govt) Ensuring closer alignment between these programs and MoH interests would likely enhance their appeal and impact¹⁵¹.

While degree-level tracks can advance health management as a field, in-service training options are also necessary for upskilling current staff with the potential for more immediate impact. As noted by Johnson and colleagues, there is evidence of increasing interest in health management and leadership training programs of late in SSA, but no clear consensus on health management competency frameworks or training approaches¹⁵². Malawi historically invested in an orientation program for health managers which has long been dormant. In 2019, the multi-ministry, cross-departmental L&MSC, developed a new in-service capacity building program in health management for DHMTs administered by the Malawi School of Government (then, the Staff Development Institute). Based on a review of management competency frameworks and a training needs assessment, a Malawi-specific competency framework and curriculum was developed. The program included a two-week residential course targeting DHMTs (trained as a team) with subsequent online learning modules, an on-the-job action learning project and a coaching component. Following the completion of all modules, graduates are awarded a certificate of completion. The face-to-face training portion of the program included modules on hard and soft management competencies as well as an orientation to relevant public service regulations with which managers require some fluency. Following coursework, managers

defined specific action plans for integrating learning into practice, which were, to some extent, followed up by teams of trainers and central and zonal MoH staff, acting as coaches.

Key informants praised the program, indicating that it provided valuable information and a new way of understanding management challenges: *“So that training is actually very important because, um. It changed.. you know, um, my. Actually, it shaped my skills and, and the way issues are supposed to be handled. In short, my management and leadership, you know, capabilities were enhanced. Yeah. Although it does look like it's a short course, but it's quite ..its very important.”* (Respondent 10 – DHMT) While course administrators indicated that the modules were designed to be practical, others felt it was still quite theoretical and welcomed coaching to support the application of principles to real life circumstances: *“Yeah, that one is very important because if you look at what we did there, it was more of theory, more of theory. But if they come up with the coaching itself, it will be more of practical. So that one would also be very important.”* (Respondent 9 – DHMT)

Though the program included a coaching component at first, it was frozen because the MoH felt that it needed more work. Issues encountered included the identification of acceptable trainers; how best to link coaching to regular processes; the appropriate periodicity of coaching; whether to coach individuals or groups and how to sustain the costs involved. On these questions, informants did not have uniform perspectives. While doctors interviewed stressed the importance of coaches having practical experience working in the system and seemed more interested in receiving one-on-one support, non-doctor DHMT members preferred coaching from non-supervisors with expertise in management and saw value in team-based approaches for promoting greater team cohesion. Doctors' desire for targeted mentorship may be influenced by the pressures of grappling with sticky challenges related to human resource management,

negotiation with local councils, supply management and the need to make less than perfect decisions under conditions of scarcity that require a very practical understanding of how to navigate an imperfect system, for which there is no official orientation. While on-the-job support was generally welcomed, some did question the efficacy of this approach in a context of overwhelming structural constraints. Beyond training and coaching, informants also discussed the need for a system of continuous learning, not only to refresh concepts but also update managers on new thinking and developments. This could be practically linked to the continuous professional development point systems governed by medical and nursing regulatory bodies.

Despite a high level of interest in the DHMT management and leadership capacity building program, the MoH had only managed to roll it out to 18 of 29 (62%) districts, at the time of writing due to limited funds. Ensuring the longevity of the program was top of mind for many informants, who suggested that the MoH would need to pass a policy requiring management training for management posts to sustain efforts. It was suggested that this would necessitate local and national-level government investment in the program and motivate health workers to complete it. While national-level policy makers agreed a policy was necessary, they were still working to address what they viewed as pre-conditions for this to happen:

“If we make it a policy, I think, I think it can happen [the program would be sustained and management posts would require management training]. But then, of course, we need these two. We need that willingness at the top level and then enough funding to make sure that we are able to train the medical doctors in the managerial skills.”
(Respondent 2 – National government)

“But with the shortage of resources, we have failed to really push the program to the way it wants to be. Because, first of all, we need to make sure that the current team of DHMTs, all of which has been trained, and that's when we can implement [a policy]. But we cannot implement before that that situation.” (Respondent 16 – National government)

Such a policy, would also likely need to engage with the wider set of considerations related to the human resource structure discussed in the national framework section.

4.E.2.5 Professional Associations

Professional associations can be quite influential in advancing the interests and stature of those with pertinent skills and training. Linnander and colleagues explained that professional associations evolved differently in the United States and Ethiopian contexts explored in their case study review – with associations in the United States being demand driven, whereas those in Ethiopia being somewhat fostered by state and development partner interests. Malawi has several professional regulatory bodies and professional associations, which also function as trade unions in the health arena. While there are two main regulatory bodies – the Medical Council of Malawi established in 1987, which governs the registration and professional conduct of physicians, paramedical and allied professions and the Nurses and Midwives Council of Malawi established in 1966—there are many more professional associations representing specific specializations, such as different medical specialists; nurses and midwives; environmental health specialists, health economists, and health informatics specialists to name a few. Most informants were not familiar with a comparable association for health managers, though some suspected such an association might be under development. *“Because like we have professional associations...the National Nurses Association, Midwife Association, the same with MEHA - Malawi Environmental Health Association. So it's almost affiliated to profession, not like the managers, but for those who have gone like, you have talked of health services management at KUHES [Kamuzu University of Health Science]. Because like now it's part of their profession specific. They don't.. They are not nurses, they are not clinicians, they are not, but they are.. they can form their own.... And lately I think we've been hearing that they are forming their professional association. (Respondent 17 – DHMT)*

What was widely reported were networks of health professionals corresponding to different DHMT positions such as DHSS, DMOs and DHSAs. These groups, reportedly very active on WhatsApp, are position-specific and serve both a peer support function and a lobbying role. The Health Services Managers Network, the DHSS group, is officially registered as an arm of the Malawi Local Government Association and has established an executive committee to oversee its affairs. In addition to providing information and support to its members, it conducts policy analysis and provides feedback to the MoH on policies and plans, often advocating for greater decision-making power at the local level.

The prospect of creating one association of health managers bridging hybrid-manager groups with disparate primary educational backgrounds was met with a sense of confusion.

“Because like ourself is not like a profession [referring to being managers in the DHMT]. We have a profession. But of going to management. Being the head of that profession entity. So I feel like there could be a little bit of conflict of interest because there would be administrators or whatsoever, or health managers whatsoever, unless if we are talking like DHMT Association of Malawi.” (Respondent 17 – DHMT)

A fundamental challenge to creating a more broadly based health management professional association, is that management is currently not regarded as a profession in the Malawi health system. Establishing management as a profession also requires shifting notions of professional identity in an institutional setting with rigid norms and strong hierarchy. Health workers need to determine how to negotiate dual identities or identity transition. For example, does aligning oneself with a health management professional association imply the shedding of one’s nurse, doctor or environmental health officer identity? As explored in the social science literature on health organizations, roles often have different social value systems or logics, which can conflict^{153,154}. Though management is typically considered prestigious and thus attractive,

this is not always the case in health care settings, where rational judgements can be seen as in opposition to an ethos of care for individuals¹⁵³ or organizationally minded at the expense of autonomy. Addressing and supporting this kind of identity transition or fluidity, will be needed not only in any attempt to formalize a more inclusive health management association, but also as part of MoH efforts to mainstream health management roles.

4.5.2.6 Summary Findings and Discussion

The importance of capacity development in health management across Malawi's health system is well recognized within the MoH and by external stakeholders, including the leading health sciences university. Through the establishment of a multi-stakeholder health L&MSC, the government has also signaled its willingness to take up a stewardship role for this agenda, which transcends any one program area or interest. Investment in the cultivation of management competencies features in policy and has begun in practice, with notable advancements in the establishment of both university-level degree options and an in-service capacity building program for DHMTs. Standards and monitoring processes that assess compliance, including with management benchmarks, are developing and informal networks of managers are emerging. One noteworthy gap is the absence of an anchoring policy framework on health management, which could promote the sustainability of these investments and enhance coordination and impact.

Lack of policy guidance likely contributes to several dynamics, which may inadvertently limit government efforts to advance health management strengthening, including limited absorption of health management degree holders into government, few incentives for pursuing

and completing health management training and health worker difficulty negotiating expectations of their former technical roles with newer managerial ones. The absence of policy may also contribute to health worker perceptions that health management is not a profession, making a transition into managerial roles potentially risky professionally.

Developing a policy and implementation plan for health management, is an important next step for the L&MSC to consider. To move in this direction it may be important to further expand the membership of the committee to include additional stakeholders who have yet to engage, including Kamuzu University and other relevant academic institutions; additional MoH departments who may have vested interest in their health workers entering or refraining from entering management positions and relevant regulatory bodies. Involving these stakeholders could help facilitate dialogue that enables more coordinated action to advance management strengthening, by, for instance, better linking degree training to Malawi government health service management needs; ensuring both degree and in-service training programs subscribe to a common health management competency framework, determining how to support continuous learning linked to continuous professional development requirements and negotiating different perspectives on management profiles and roles that may exist across MoH departments.

Health management policy development will require the Steering Committee to consider how health management qualifications (degrees, training, experience) should fit into or alter prevailing human resource structures and practices. This study revealed that presently health management expertise is not specifically considered by the human resources for health establishment and hiring norms. The Committee should identify positions for which management training and experience is desired and at what level. It should consider revising or establishing hiring criteria for these positions to allow for the consideration of management

qualifications and identify explicit on-ramps for health management graduates to join the government health service. It will need to weigh the appropriate balancing of clinical and management qualification requirements for different positions and how these translate into human resource grades. In making this determination, it will be important to consider career pathways for hybrid-managers coming from various health science disciplines and specifically determine which positions require or favor medical training, considering the limited number of doctors in the system. In many Western countries, where there has been greater use of non-medical doctor managers to achieve a double bottom line of cost control and quality of care, there is a strong debate about whether physician-managers are superior to non-medically trained managers. There is limited robust conclusive evidence to indicate which model is superior¹⁵⁵⁻¹⁵⁸. Nonetheless, the dominant trend of installing non-medically trained hospital executives in these settings is contested and may be reversing course^{158,159}.

The Committee may also weigh how to transition in-service management training to an orientation program offered at regular intervals for new managers as staff turnover. By formalizing completion requirements for this program, it could be a qualification for further career advancement and encourage investment in the program. MoH senior leadership efforts to seek long-term funding commitments from a mix of domestic and development partner resources will be important.

Last, policy development should also be accompanied by a change management plan that explicitly recognizes that changing organizational norms and culture is a long-term process. Adopting a managerial approach in the public health service, will curb the autonomy of highly esteemed doctors in some respects, not only by potentially opening some managerial positions to non-managers but also by having clearer standards for performance and accountability

mechanisms. Acknowledging that this will be met by some resistance and considering how to negotiate a changing organizational culture will be important. By including potentially oppositional perspectives in the L&MSC and decision-making processes it may be possible to work through contested issues before implementation roll out and potentially head off some resistance. Building in discussion of these issues and the cultivation of new values within in-service and pre-service training programs may also help support a cultural pivot. While these changes will require time to root, good communication of their rationale and implications across the health service, including through handbooks for health management, may help smooth the process.

4.6 Concluding Note

This chapter uses Malawi as a case to explore the enabling environment for health management strengthening through the application of two conceptual frameworks with different orientations. In doing so, it highlights areas for the Malawi health L&MSC to further consider as it determines future actions to strengthen district-level PHC systems management. Each framework contributed some unique and common insight. These lenses also offered opportunity to explore some issues, which were not addressed through the prior PEA. Drawing on the Malawi case as well as DHSSi's PEA, chapter five compares frameworks and builds on them to propose a new framework for investigating the enabling environment for sub-national health management team strengthening.

Chapter 5: A New Framework for Understanding the Enabling Environment for Sub-National Health Management Team Strengthening and Implications for Application

5.1 Introduction

The importance of health management and leadership strengthening to the achievement of PHC goals and stronger health systems is becoming more widely appreciated and this area of work is increasingly the subject of implementation research, particularly in SSA^{160–163}. Most interventions to-date have approached health management strengthening from a competency development perspective. Studies and commentary explore different competency frameworks, the need to balance management and leadership training and the effectiveness of different modes of capacity development, such as training, action research, on-the-job coaching and mentoring^{25,86,152}. Though the importance of institutionalization of these programs is recognized, it seldom happens¹⁶⁴. This has resulted in a patchwork of efforts influenced by different philosophies, promulgating different approaches and driven by various instrumental aims in many countries in ESA. Further, comparatively little attention is paid to whether the environment is supportive of effective management practice, a critical component to achieving impact.

In recognition of these challenges, DHSSi aimed to do two things differently. First, to harmonize efforts under one government-led vision, it supported countries to form national-level task forces to elevate the importance of sub-national health management strengthening, support governments to assume a stewardship role and align efforts to a common government defined

competency framework, designed to respond to country specific expectations and needs.

Second, it incorporated a component on addressing enabling environment obstacles to effective management practice in its ToC, recognizing that competency development alone would not change behavior and that new organizational practices require motivation, reinforcement and time and space to root.

Despite acknowledging that improving the enabling environment was critical to impact, action to address this area proved more difficult. The concept of an enabling environment or contextual factors, incorporating health systems, legal, bureaucratic, fiscal, informational, political and cultural components, is vast and elusive^{6,7}. Further, the most appropriate means of probing these factors, determining their relevance, prioritizing action and addressing them was also not evident. No commonly agreed upon frameworks for assessing these conditions for sub-national PHC system management strengthening in LMICs exist, to the author's knowledge. In contrast the need to develop management competencies among sub-national health managers was strongly demanded in countries and this area of work was more approachable.

A key finding from the evaluation of DHSSi was that better pre-intervention situation analysis of a broad set of factors affecting health management practice could have improved intervention design and likely effectiveness. To help better define and consider enabling environment factors of import, this chapter brings together insight from the application of three frameworks: 1) the Overseas Development Institute's problem-driven PEA framework used in three countries (including Malawi) through a research study commissioned by UNICEF under DHSSi, 2) the professionalization of health management themes put forward by Linnander and colleagues and 3) the WHO 2007 Health Leadership and Management Strengthening

Framework. The PEA framework and corresponding findings are presented in section 3.4 and the professionalization and WHO frameworks and associated findings are presented in chapter 4.

5.2 Reflection on approaches to diagnose the enabling environment for health management strengthening

Two of three (Professionalization and WHO) frameworks specifically represent theory for how health management can be advanced, drawn from cases studies of health management strengthening efforts in countries. They were selected because they represent more holistic conceptions of management strengthening, which include but extend beyond competency development. The third, the applied political economy lens, is not health management specific. It is relevant to a broad array of policy and programming change processes. Each framework has a distinct orientation and different strengths and weaknesses. Each yielded unique and relevant insight. The utility of each framework is discussed in turn and a summary is presented in Table 5.

Problem-driven political economy analysis

The application of an applied PEA to development and health programming has become more popular to better understand the context for programming and policy interventions^{127,128}. Applied PEA recognizes the political dimensions of change processes, working to surface, perhaps not always well appreciated, underlying influences which can explain the status quo and also flag potential resistance to new policies, programs or ways of doing things. The Overseas Development Institute framework is very broadly cast, intentionally including a wide range of factors that are loosely defined. It proposes two perspectives— structural and agency – which are

somewhat difficult to parse and make sense of in practice. Due to its open-ended nature, it likely requires a more experienced research team with subject matter expertise to operationalize and apply it. It also requires the definition of a specific problem to guide inquiry, which may narrow the field of vision to issues that have already been identified and in some ways limit the exploration of potentially unforeseen influences.

Unlike the other frameworks applied, this one includes aspects of what is sometimes considered “intangible software²⁴” in the health systems vernacular, or aspects of organizational culture that relate to interpersonal dynamics, such as norms, power relationships, and decision logics. In practice, the use of this lens in three DHSSi countries yielded six cross-cutting summary insights related to the function of management support systems and processes; financing; accountability; decision space and management capacity and competency. Unique contributions included the need to ensure health management systems are mutually reinforcing and processes such as planning and financial management are appropriately sequenced and aligned. It also highlighted the need to simplify processes, detailing the impact of incomplete decentralization on the proliferation of bureaucracy. Health financing also emerged, as it did in the application of other frameworks, as a major constraint. While this approach yielded valuable insight, it also surfaced many issues that extended beyond the health sector and were not feasible to address in the context of DHSSi. Efforts were made to narrow the scope to areas where the health sector could meaningfully intervene for recommendation generation.

Professionalization Pathway

The five themes related to a professionalization of health management pathway from Linnander and colleagues speak specifically to an approach to public service reform that promotes the explicit incorporation of a new health specialty – management. Though this construct was developed based on a review of health management professionalization processes in select countries, the themes seem widely applicable to any professionalization process. The factors considered are relatively few and pitched at a high-level, more relevant to policy formation than detailed operational planning. Given that the framework looks to root health management as a profession, it addresses the sustainability of this work in a unique and interesting way, suggesting that once developed, professional associations will play a significant role in advocating for health management related reforms and maturation. In practice, this framework is approachable and useful, but could benefit from further elaboration of sub and additional themes that are important to consider. Further, the themes seem to suggest a logical, sequential process, but this order may not hold in reality, as demonstrated by Malawi.

WHO Health Leadership and Management Framework

This framework, specific to health management, proposed four domains with many sub-topics. Unlike the other two frameworks it is pitched at program planning level, with sub-domain factors that are quite specific. It is approachable and goes a long way toward outlining a list of inter-related conditions that should be in place. Nonetheless, review alongside the two preceding frameworks suggests some important components are missing at both macro and micro levels. At the macro level, the framework is less attendant to government motivation, demand or willingness to invest in management strengthening. Similarly, it does not consider how this

agenda will self-perpetuate or be sustained. The relevance of the broader health financing environment to manager decision space and latitude for action is also not included. At a more micro-level it does not include the softer, intangible hardware factors such as management team relationships and the importance of fostering management team cohesion in settings with strong professional hierarchy and a tendency towards medical doctor autonomy in decision making. Nor does it address issues of identity transition, which may play a role in individual willingness to change behavior.

Table 5: Comparison of the orientation and factors included in the three approaches adopted to assessing the enabling environment for health management

Lens	Orientation	Common Factors	Unique Factors
Political economy analysis	<ul style="list-style-type: none"> ▪Applicable to any policy or organizational problem. ▪Broad set of factors that are loosely defined ▪Useful for understanding underlying rationale for prevailing management practices, including norms, relationships, incentives and decision logics 	<ul style="list-style-type: none"> ▪Policy ▪Organization motivators (demand, incentives) ▪Individual incentives 	<ul style="list-style-type: none"> ▪Structural features: geopolitics, culture, social structure, historical legacies ▪Informal rules of the game: norms that shape power relations ▪Individual motivation ▪Relationships between relevant actors ▪Decision logics
Professionalization Pathway	<ul style="list-style-type: none"> ▪Applicable to public service reform efforts to incorporate or formalize new work specialization (in practice, applied to health management) ▪Narrow set of factors that are loosely defined ▪Useful for understanding conditions to support management maturation and sustainability 	<ul style="list-style-type: none"> ▪Policy ▪Organizational motivation (demand, incentives) ▪Competency (training) ▪Accountability 	<ul style="list-style-type: none"> ▪State action to develop new specialization ▪Professional associations

<p>WHO Health Leadership & Management Framework</p>	<ul style="list-style-type: none"> ▪ Specific to health management strengthening ▪ Broad set of factors that are specifically defined ▪ Useful for considering wider organizational context and supports required for managers to operate effectively 	<ul style="list-style-type: none"> ▪ Policy ▪ Competency (training) ▪ Accountability ▪ Individual incentives 	<ul style="list-style-type: none"> ▪ Organizational capacity (manpower, work environment, management systems) ▪ Support to managers
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Each framework presented sheds light on different factors beyond individual or team management competency that have a bearing on health systems’ ability to transition from an amateur management culture to a professional management culture, while none is necessarily complete based on learning from the DHSSi experience and Malawi case study. In addition, these approaches do not organize conditions hierarchically or according to different levels of intervention, such as actions targeting individuals or teams, the broader organization and the policy environment, which could help support translation of findings to action.

5.3 Theory of Change or Framework for Situation Analysis?

To be most effective theories of change should articulate interventions, the mechanisms through which they are expected to work and desired results¹²². They should indicate how context affects how interventions operate¹⁶⁵. Complex interventions, more difficult to specify in detail, require special treatment. Complex interventions are “...*dynamic and responsive to changing needs, opportunities and challenges rather than following a path that has been tightly defined in advance to achieve tightly specified objectives*¹²².” Thus, while it is possible to develop ToC for complex interventions, they are typically more illustrative of a vision rather

than a pre-determined, unwavering intervention path. Program theory for these interventions should be revisited and adapted throughout the course of implementation to account for emergent dynamics and learning.

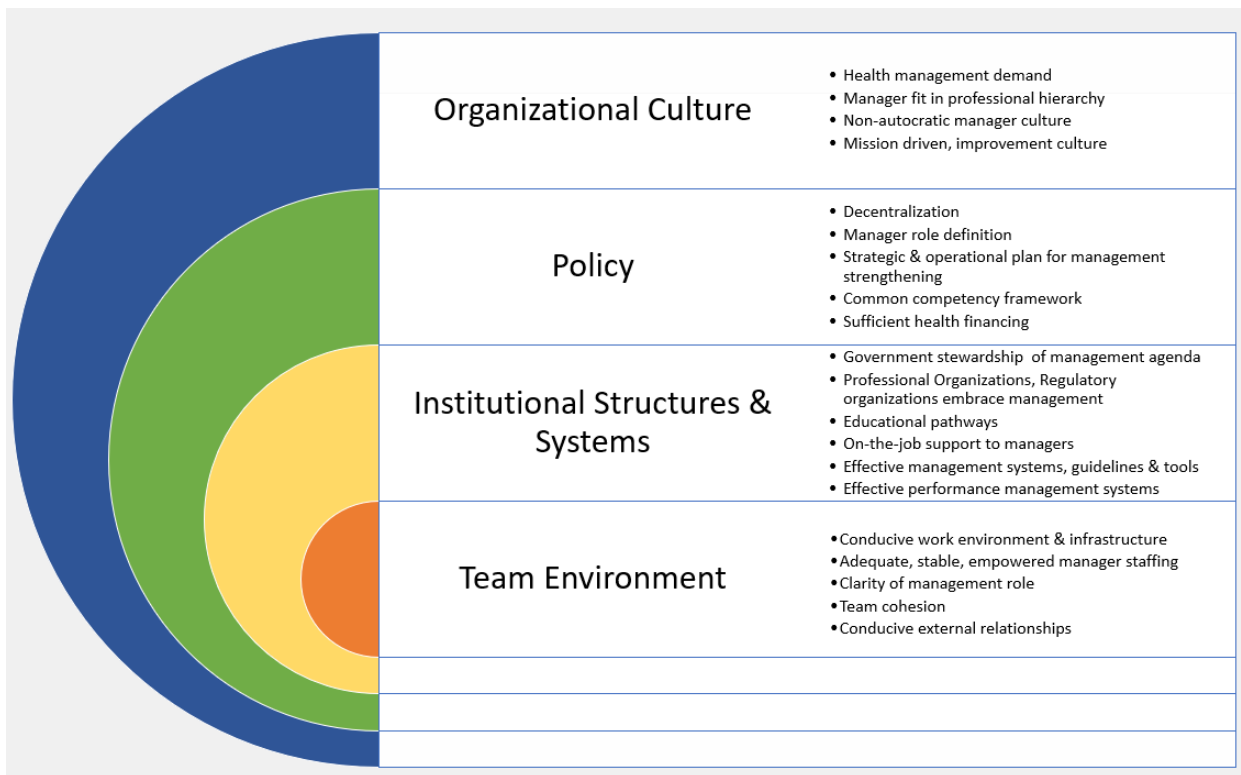
At the proposal development stage for this project, this ILE intended to reflect on DHSSi's original four-country ToC presented in section 3.3.1 and provide an update based on experiential learning and the research presented here. However, the DHSSi experience underscored that entry points and strategies for health planning and management strengthening must be highly contextualized to local health system contexts and enabling environment factors and that strategies should evolve over time. Instead of proposing a revised DHSSi ToC, which would not be country specific given the multi-country nature of the initiative, what is arguably more useful and responsive to the DHSSi evaluation recommendation to conduct better initial situation analysis to inform country-specific intervention strategies, is the proposal of a new framework for understanding intervention context.

5.4 Proposed Framework for Understanding the Enabling Environment for Sub-National Health Management and Leadership Strengthening

Relevant factors from the WHO and Professionalization frameworks; new factors that emerged during their application and insight for the DHSSi applied PEA studies have been consolidated into a new proposed framework for considering the enabling environment for district health management team strengthening. While this is tailored specifically to DHMT health management strengthening efforts, it may have wider resonance for management strengthening efforts at facility and hospital-levels. In developing this framework, the structure and elements of the Consolidated Framework for Implementation Research (CFIR) were also

reviewed. CFIR, though typically used to design implementation research, can be used to aid in prospective intervention design.^{166–168} It is comprised of five domains and forty-eight constructs that can be applied to any intervention and is particularly useful for identifying contextual determinants that affect implementation. CFIR posits that it is important to understand outer and inner contexts (two CFIR domains), in addition to the intervention itself and the individuals it targets. The newly proposed framework for understanding the enabling environment for sub-national health management team strengthening presented here builds on CFIR notions of outer, inner and team contexts, but tailors these general contextual realms more specifically to the subject at hand (Figure 9).

Figure 9: Enabling Environment for Sub-National Health Management Team Strengthening Framework



Outer setting domains include organizational culture, the policy environment and institutional landscape and systems. Organizational culture generally refers to “*values and beliefs that are shared by personnel in an organization*¹⁶⁹.” In this case, it is applied to the culture within the government health service. This domain includes factors related to health management demand, considering levels of demand among relevant stakeholder groups such as MoH policy makers, the broader health workforce and influential partners, like academia, development partners and insurers, in some contexts. It also includes a factor referred to as ‘manager fit within the professional hierarchy.’ This reflects the extent to which management is desirable and how it measures up to other professions within the health system. The third factor aims to understand what behaviors or style is expected of managers and the degree to which an autocratic, non-consultative style is expected and accepted, as this can make team function more challenging. The last factor in this domain did not specifically emerge from this study, but relates to a concept in CFIR, which is considered relevant. That is the extent to which there is a recipient-centered culture (CFIR-proposed theme), or what is called here mission-driven culture. This aims to capture whether the culture of the organization is in line with its mission of population health improvement.

The second domain, the policy environment, considers: 1) decentralization, 2) health manager definition in human resource policy, 3) health management strengthening strategic and operational plans, 4) the definition of a health management competency framework and 5) the health financing context. Decentralization considers the extent of *de jure* and *de facto* decentralization of functions to sub-national health management teams and whether regulations are aligned with policy. It also encompasses how decentralization status is reflected in accountability arrangements for DHMTs and whether these arrangements are clear and efficient.

The range of DHMT decision space resulting not just from government policy, but also other influences, is also included. The second factor on health management definition, builds on Linnander's theme related to the existence of a national framework for the health management role, but more specifically points to how the manager role is incorporated in human resource policy, particularly whether manager positions are identified in the human resource structure; how qualifications for these positions are considered; and the extent to which there is a clear career path for those with health management training in the government health service. The next factor considers whether health management strengthening is specifically included in national health strategic plans as an investment area, whether there are operational plans to advance this work and the extent to which it is financed from a sustainable source. The availability of a government-led competency framework for health management is also included, as this can help offer a framework for joint action across a range of actors. Last, the general health financing environment and the extent to which management teams have some discretion in resource allocation is considered.

The third domain, the institutional and systems landscape, refers to the presence of institutional structures that are supportive of health management. These include: 1) government stewardship of the health management strengthening agenda, with a clear focal point or focal department for leading efforts; 2) educational pathways for individuals to be trained in health management, including university degree programs and in-service training programs; 3) a health management professional association; 4) recognition of health management by regulatory bodies; 5) health management systems, guidelines and tools to support management routines; 6) performance management systems that assess organizational compliance with standards and

individual performance assessment and 7) on-the-job support systems for managers to that help deepen their skills, through mentorship, coaching, peer support or other methods.

The last domain pertains to the team environment and incorporates factors related to 1) the physical work environment and available infrastructure (IT, transportation), 2) role clarity, 3) adequacy of staffing considering numbers, competency, turnover and whether staff are officially appointed in roles, 4) team cohesion and 5) relationships with external actors to the team, such as local government, the MoH, private sector providers, NGOs and communities. This domain aims to capture the extent to which the micro-team environment is conducive of effective management practice.

Illustrative questions pertaining to the factors and sub-factors included in this framework have been developed to support situation analysis and are presented in Table 6. These questions are a starting point and may be further tailored or elaborated to reflect a specific country context.

Table 6: Factors, Sub-Factors and Guiding Questions for Situation Analysis for the Enabling Environment for Sub-National Health Management Team Strengthening Framework

ORGANIZATIONAL CULTURE		
Factor	Sub-factor	Question
Health Management Demand	Policy maker	To what extent do government health policy makers prioritize health management strengthening as important and demand improvement?
	Health workforce	To what extent does the broader health workforce recognize the importance of health management?
	Other actors of influence (Academia, Development Partners, Insurers)	To what extent do these actors demand health management improvement?

Manager Fit with Professional Hierarchy	Desirability of management positions	To what extent are health management positions considered desirable compared to clinical positions?
	Professional rank	How do managers fit into the prevailing professional hierarchy, considering possible variation in manager academic training. Are there plans for addressing potentially shifting hierarchies?
	Identity	To what extent will health workers who become managers experience challenges related to role and identity transition? Are there supports available to them to facilitate change?
Non-Autocratic Manager Culture	How is the management role commonly understood? Is a command and control/autocratic norm common? How do managers relate to their broader team? How are expectations of manager soft skills and individual vs team orientation communicated and buttressed?	
Mission-Driven, Improvement Culture	Do members of the organization subscribe to a mission-driven orientation that also values improvement?	
POLICY ENVIRONMENT		
Factor	Sub-factor	Question
Decentralization	Designation of functions	Is there a clear definition of manager roles and functions? Have job descriptions been developed?
	Accountability arrangements	Are reporting arrangements for managers defined, realistic and uncontested?
	Regulations	Do relevant regulations support management functions? For example, if policy shifts but public service regulations have not been harmonized, there may be contested scope of action.
	Decision space	To what extent are managers able to make decisions and problem solve in practice considering the influence of national government, local government, non-governmental organizations and other actor interests?

Health Management Role Definition and Inclusion in Human Resource Policy	Management role inclusion in HR structure	Does the human resource establishment include health management roles and do grades consider management training as an asset?
	Policy on qualifications for management positions	What qualifications are required for health management positions? Is management training incentivized? Does policy make clear how lay-managers (no clinical training) and hybrid managers with different primary training (medicine, nursing, other) are considered in the health workforce establishment?
	Career path	Are there clear entry points and career progression pathways for individuals trained in health management?
Strategic and Operational Plans	Strategic plan	Is health management strengthening included in health strategic plan(s)?
	Operational plan	Is there a national operational plan for health management strengthening?
	Financing	Is appropriate funding allocated to health management strengthening from government and non-government sources? What is the duration and sustainability of this funding?
Competency Framework		Has the government designed a competency framework for health management, which may differentiate competency expectations according to different management roles? Is it used to align efforts/investments?
Health Financing		Is primary health care financed at a level where managers have some discretion in terms of allocation of resources beyond fixed running costs?
INSTITUTIONAL LANDSCAPE & SYSTEMS		
Factor	Sub-factor	Question
Government Stewardship	Responsible actor/ department	Is there a focal point or designated organizational home for health management strengthening within government? Does this arrangement have the necessary seniority to take decisions and coordinate across relevant stakeholders?
	Coordination group	Is there a coordination group to set the agenda and make decisions that involves critical stakeholders within the MoH, local government, and relevant non-governmental actors (academia; development partners; implementing organizations; training organizations; professional and regulatory organizations)?

	Partnerships	Has the government developed supportive partnerships to advance health management strengthening aims?
Professional Association(s)		Is there a professional association for health management? Who is eligible? What are the priorities?
Regulatory Association(s)		Do existing regulatory organizations cover health management? Do prevailing continuous professional development point systems consider health management training courses?
Educational pathways	Degrees /certificates	Are there academic institutions with expertise in health management? Do they offer degree/certificate programs in health management? Do these programs subscribe to government health management requirements?
	In-service training options	Are in-service training options in health management available to support competency development for health workers? Do they culminate in a recognized certificate?
	Courses	Are there additional ad-hoc courses that health workers and managers can take to update and mature management skills?
Support to Management teams		Are there on-the-job competency development approaches to help managers apply skills, mature practice and receive feedback? These may include action learning approaches, coaching, mentorship or peer support arrangements.
Management Systems, Guidelines and Tools	Availability	Are the established systems to support management functions, such as: planning; procurement and financial tracking; supply management; human resource management; health service performance management; communication and consultation etc. that are in-place, functional and user friendly?
	Coherence and ease of application	Are guidelines for processes simple, accessible, and realistic for teams? Are processes appropriately sequenced to be optimally effective?
	User access and competence	Do relevant managers have easy access to relevant systems, guidelines and tools and do they know how to use them effectively?
Performance Management Systems	Organizational performance	Are performance standards, metrics and monitoring systems in place and functional?

for Organizational and Individual Performance	Individual performance	Are individual performance review processes in place and functional?
	Incentives & sanctions	Are there systems of sanctions and rewards that are clear and functional? (Rewards may be related to promotion, recognition, autonomy, availability of resources etc.)
TEAM ENVIRONMENT		
Factor	Sub-factor	Question
Physical Work Environment and Infrastructure	Office set-up	Is there suitable office space for management teams?
	Computing and internet technology	Is there access to necessary IT infrastructure, including hardware, software, internet connectivity etc? Do managers have appropriate skills to operate relevant tools and programs?
	Transportation	Is transportation available (including fuel and maintenance) to facilitate facility visits and community consultation, as appropriate?
Adequate Staffing	Number	Are there sufficient managers available?
	Competency	Do managers have requisite management competency aligned with job requirements?
	Turn over	Is turnover or vacancy a challenge? Are there processes to support knowledge transfer?
	Designation	Are staff installed in their positions in an official capacity (as opposed to acting capacity)?
Role Clarity	Job descriptions	Are clear job descriptions available and understood? Are benchmarks or standards for time allocation to management and technical (clinical/service delivery) tasks available and understood?
	Aligned Expectations	Is there clarity on the management role and expectations among managers and non-managers? Does the prevailing understanding of the role comport with written job descriptions?
Team Cohesion		Is there a sense of team harmony and common purpose?
Relationships with External Actors	Coordination	Is there effective coordination and relations with local government, central MoH, other relevant sectors, communities/community governance structures, private sector providers and NGOs?
	Transparency	Are health plans and budgets shared with stakeholders?

5.5 Operationalization of the Enabling Environment for Sub-national Health

Management Team Strengthening Framework

Though the maturity of health systems arrangements, decentralization reforms and management capabilities certainly vary by country, experience from Kenya, Malawi, Tanzania and Uganda suggests that sub-national health management strengthening is still in relatively early to middling stages in the ESA region. Thus, enhancing the policy context, the institutional environment and working on social norms within the health service are likely important foundational steps in a hierarchy of capacity building needs to consider¹⁷⁰. Engaging with these influences can also promote the durability and scalability of investments and reduce dependence on the capacity of certain managers or management teams in the system, which are often in flux¹⁷¹.

DHSSi invested in knowledge gathering exercises but these unfolded over several years. More robust investment in pre-intervention context analysis and sensemaking processes coupled with targeted implementation research to guide implementation strategy adaptation over time may have been a more efficient strategy. For countries that choose to take on this agenda, there are many angles through which management strengthening can be tackled. Grounding the determination of appropriate intervention design and sequencing in a holistic understanding of how context impacts management practices, will likely improve results. However, shifting focus to these domains implies that interventions will require longer time horizons. Setting appropriate expectations and thinking critically about how to report intermediate progress are important considerations to ensure governments and donors agree on the value of the investment. Practically, this framework can be used as an initial step in theory building to guide intervention design at the country-level. Through document review, key informant interviews and short

online surveys, design teams can take the pulse of how supportive the environment is of a professional management culture in the health service. By assessing strengths and weaknesses in the environment, the team can prioritize areas of work to support the maturation of sub-national health management. If appropriate, this can be paired with an analysis of health competencies and learning needs to support the development of management competency development strategies.

This approach will necessitate willingness among government, implementers, and donors to engage in more upfront investment of time and energy in situation analysis and intervention design, without preconceived notions of what interventions and activities may be most useful. While this may seem sensible, it is not necessarily operationally easy for large organizations to operate in this way. The “figuring out” process can be challenging. It is critical that key governmental focal points help drive this process, to ensure that situation analysis is valid and that intervention design is acceptable and aligned with key political agendas or opportunities in the health sector. To affect this process, it will likely be necessary to establish a steering group of stakeholders from government (at all levels) and non-governmental actors, like the health L&MSC in Malawi. While this group may not necessarily undertake situation analysis, it can and should contribute to and validate finding and intervention design. To be efficient, the situation analysis should be guided by a smaller programing team with the assistance of some country-based health systems researchers, who can also accompany the intervention implementation process and support tailoring over time through targeted implementation research.

Beyond situation analysis, this team could adopt an agile embedded approach to implementation and research. As suggested by Phillips and colleagues, this process “*merges*

research with management” to both support continuous learning and adaptation of interventions to meet organizational objectives as well as supporting applied research to determine what is working and how it works¹⁰³. This process, adopted from computer science, brings together implementers, managers and researchers to work through the process of discovery, adaptation and scaling, and recognizes the import of ensuring interventions are attune to institutional realities and needs, thus ensuring MoH managers and implementers have a prominent role in review and decision making alongside researchers, which is critical to intervention durability and scale.

5.6 Implications for UNICEF’s HSS Approach to Sub-National Health Systems

Strengthening

This ILE has argued that UNICEF’s sub-national health management strengthening agenda is an important contribution to supporting countries to achieve their PHC goals, but that UNICEF will need to continue to adopt a broader view of how to approach this work, which incorporates more attention to the policy environment; institutional setting and systems environment; organizational culture within the MoH as well as team dynamics, to make it work.

This is a difficult undertaking both for countries, but also for UNICEF and other large institutions, which typically operate by laying three-to-five year plans upfront and working to execute them progressively, usually in line with their original theory of change. Internal planning and reporting procedures; donor requirements; challenging contracting systems, which make shifting the nature of partnerships difficult and multiple competing demands on staff time can all limit real time adaptability. Thus, in addition to embracing a broader scope of action,

typical programming approaches will also need to promote the expectation of iterative implementation and learning aligned to country planning and reviews cycles, where initially forecast milestones and outcomes may need to change.

To do this, UNICEF can build upon several strengths. First, UNICEF typically has excellent relationships with MoHs, works very closely with MoH decision makers at various levels and negotiates and aligns all workplans with government. Second, UNICEF can be an effective convener, leveraging relationships with MoHs as well as health donor groups and implementing agencies to support shared visioning and collaboration. Third, UNICEF has embraced the importance of embedded implementation research to support ongoing intervention adaptation and increasingly is nurturing relationships with local universities and research institutions ¹⁷². However, to-date, much of this work has been relatively small scale. It will be important for UNICEF to continue to consider how to mainstream an embedded implementation research approach, perhaps adopting agile principles, to support continuous learning and adaptation. Instead of being a relatively small component of programs, this approach should be used to support more holistic intervention planning and regular review and adaptation with key stakeholders. As part of this, institutionally, UNICEF will need to consider when this approach may be favored over more typical evaluative approaches that are presently more commonly used. This way of working will also necessitate proactive discussion with major donor partners, not only to support more flexible funding arrangements but also to engage in longer term investments, which can be truly transformational if given time and space to evolve.

5.7 Conclusion

Strengthening sub-national health management to enable the expansion of high-quality PHC in ESA is not adequately resourced and is under-appreciated in many health strategic plans at global and national-levels. There is still much work to be done to elevate the importance of this agenda; determine appropriate institutional arrangements for its stewardship; and articulate visions and plans for how to approach this work that fit with other major government priorities. DHSSi and the follow-on Malawi case study highlighted the complex web of interconnected factors in managers' environments that can help or hinder progress, which extend well beyond team management capability. These include levels of PHC financing; functionality of public financial management systems; decentralization arrangements; the existence and simplicity of management support systems and tools; partnerships; staffing levels; manager fit in the hierarchy, and team cohesion, among other factors. To advance health management strengthening in these contexts, it is critical to design interventions that help make the environment in which managers work more conducive to performance. While this was one of three major components of the DHSSi initiative, it was not the entry point for engagement and should likely be a leading component of management strengthening interventions in the future.

To design apt country specific strategies, a new framework has been proposed in this ILE to support better prospective definition of the wider enabling environment. This framework draws on factors included in the WHO Health Leadership and Management Strengthening Framework; health management professionalization themes proposed by Linnander and colleagues; and other factors that emerged through DHSSi PEA. In lieu of a pre-defined theory of change, this framework could support country-level situation analysis to consider appropriate priorities, entry points, and sequencing of interventions. These decisions could then be

articulated as specific country-level program theory. Acknowledging that efforts to advance PHC systems management are complex and that relevant factors are interdependent, program design should incorporate implementation research to test theory assumptions, learning cycles and opportunities to iterate on and improve program theory and thus intervention roll out over time.

One major challenge that underlies much of this work is limited financing for PHC. There is evident need to ramp up investment in PHC in the ESA region, both through governmental and external resourcing. Ensuring that available resources are used optimally is also important and underscores the importance of investment in management and leadership. UNICEF, along with other partners, has an important role to play in elevating this agenda and supporting countries to design approaches to PHC systems health management strengthening that will help them achieve their population health goals.

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Appendix A: DHSSi Maturity Model Scale and Definitions

This maturity model was developed by UNICEF and Oxford Policy Management as a measurement tool for DHSSi

COMPONENTS		LEVELS OF MATURITY				
		1	2	3	4	Documentation
1. Evidence-based prioritisation	1a. Health bottlenecks are identified using BNA (i.e. using data on the 6 determinants of effective coverage to identify bottlenecks and based on situation analysis to identify tracer interventions)	BNA is not used to identify health bottlenecks	BNA is used but in a limited way (e.g. only limited use of BNA charts, guidelines are not adhered to, weak situation analysis)	BNA is used to identify health bottlenecks and mostly in line with guidelines (e.g. some BNA charts used, bottlenecks remain high level, moderate quality situation analysis)	BNA is done as per the guidelines/training content including high quality situation analysis	UNICEF action tracker; BNA documentation
	1b. Identification of priorities incorporates equity analysis (underserved populations and locations)	Identification of bottlenecks does not use disaggregated data (no breakdown by age and/or gender)	Identification of bottlenecks uses data that is disaggregated in a limited way (e.g. categories remain broad)	Identification of bottlenecks uses data that is partially disaggregated (e.g. more detail is available on age/gender variations)	Identification of bottlenecks fully uses data that is disaggregated by key stratifiers (e.g. age & gender)	UNICEF action tracker; BNA documentation (it would be helpful to have a 'gold standard' BNA to compare to)
	1c. Causal analysis is undertaken to inform action on bottlenecks	Causal analysis is not undertaken	Causal analysis is undertaken in a limited way (e.g. this is broad, not specific and logic is unclear)	Causal analysis is undertaken and broadly sound (e.g. sub-district analysis, some level of detail, logic is clear in most place)	Causal analysis is undertaken as per the guidelines/training content (e.g. sub-district analysis, high level of detail, clear logic, underlying causes identified)	BNA documentation; other evidence and national guidance (as referenced in the documentation)

	1d. Key activities identified to tackle bottlenecks are appropriately prioritised	Key activities to tackle bottlenecks are not prioritised	Broad list of key activities; only limited evidence of prioritisation	Some effort made to prioritise key activities that address root causes (some thought to resource constraints - human, financial, material).	Key activities that address root causes are clearly prioritized in line with resource constraints (human, financial, material)	AWP documentation; meeting minutes; prioritisation exercises
2. Annual work plan	2a The AWP includes activities identified through the BNA prioritisation process	The AWP does not include activities prioritised through the BNA	The AWP makes limited reference to prioritisation through the BNA (e.g. includes different activities)	The AWP is moderately aligned with activities prioritised through the BNA (e.g. most AWP activities match those identified through BNA)	The AWP is fully aligned with activities prioritised through BNA (i.e. AWP activities match those identified and prioritised through the BNA process)	Planning meeting minutes; evidence of partner activities aligned to the AWP
	2b The AWP specifies timeframes and responsible individuals/teams	No timeframes or responsible individuals/teams are specified	Limited reference to timeframes or responsible individuals/teams (e.g. one or the other element is missing, only indicated for a few activities)	Moderate reference to timeframes and responsible individuals/teams (e.g. timeframes and responsible people indicated for most activities, but are not specific; or specific but one element is frequently missing)	The AWP provides specific timeframes and responsible individuals/teams for all or almost all activities	Planning meeting minutes; evidence of frontline/other government activities included in the AWP
3. Stakeholder and community involvement	3a. The AWP is developed in collaboration with other district stakeholders engaged in health service delivery e.g. FBOs, NGOs, chiefs	AWPs are not developed in collaboration with other district stakeholders	The AWP is developed with limited collaboration of other district stakeholders (e.g. only a few of the relevant stakeholders, minimal input)	The AWP is developed with moderate collaboration of other district stakeholders (e.g. some key stakeholders missing, or only involved in some of the critical steps)	The AWP is developed with broad collaboration with other district stakeholders (e.g. all relevant stakeholders involved at key steps, good attendance at regular planning meetings)	AWP meeting minutes; attendance lists

	3b. The AWP is developed in consultation with sub-district government health stakeholders (e.g. frontline health staff, primary health facilities)	No input to AWPs from sub-district government stakeholders	The AWP is developed with limited collaboration of sub-district government stakeholders (e.g. only a few stakeholders consulted, minimal input)	The AWP is developed with moderate collaboration of sub-district government stakeholders (e.g. some sub-district stakeholders provide input for district planning meetings, some sub-district plans reviewed)	The AWP is developed with strong collaboration with sub-district government stakeholders (e.g. based on thorough analysis of facility plans or regular input from sub-district representatives)	AWP meeting minutes; attendance lists
	3c. Citizens have a significant degree of involvement in annual planning decisions	Citizen representatives are not informed of district annual planning processes or do not provide any input	Limited involvement e.g. citizen representatives have few or no organised opportunities to provide input to planning, limited attendance at meetings, limited gathering of citizen input to inform planning	Moderate involvement e.g. citizen representatives have regular opportunities to provide input to planning or substantial work to gather citizen view to inform planning, but no decision-making power	Citizen representatives are collaborators in priority setting and development of plans and given equal voice and decision-making power as government officials	AWP and review meeting minutes
4. Activity execution	4a. Key activities identified for bottleneck reduction are implemented within the target year	<25% priority activities indicated in AWP are implemented	25-49% priority activities indicated in AWP implemented	50-75% priority activities implemented	>75% implemented	Meeting minutes, action tracker
	4b. Adequate resources are allocated to key activities (as identified based on target bottlenecks)	No resources are allocated to key activities	Resources allocated to key activities are insufficient to cover implementation	Resources allocated to key activities are largely adequate but with some constraints for resource mobilization from partners	Resources allocated adequately address key activities with adequate funds from govt and partners	AWP, budget

5. Performance review	5a. There is a regular review of AWP's and appropriate course correction	There is no review of AWP's between annual planning rounds	The AWP is reviewed at least once between annual planning rounds (e.g. after 6 months) but there is no evidence of course correction (no identification of action required in response to the review)	The AWP is reviewed with some identification of action required in response	The AWP is reviewed and action required in response to the review is documented and followed up	AWP review meetings minutes; BNA action tracker
	5b. BNA and other data/evidence are used to assess progress	BNA and other data/evidence is not referred to during AWP reviews	BNA and other data/evidence is referred to but lacks analysis or presentation	BNA and other data/evidence is referred to based on some analysis and presentation	BNA and other data/evidence forms the basis of the review; this is done using the BNAApp or other form of visualisation	AWP review meetings (presentations); BNA action tracker
6. Management accountability (Uganda only)	6a. The district health management team has clear roles and responsibilities	The health management team does not have defined roles and responsibilities (e.g. there is no job framework or team guidelines)	Roles and responsibilities are defined only in a limited way (e.g. broad remit only, roles not specific)	There health management team has clearly defined roles and responsibilities but these are not consistently followed	The constituted health management team executes its roles and responsibilities as per defined guidelines and frameworks	Health management team organogram; job frameworks; team guidance
	6b. The district health management team meets on a regular basis	The health management team does not meet regularly (less than twice a year)	The health management team meets only occasionally (less than once per quarter)	The health management teams meets on regularly (at least once per quarter)	The health management team meets every month or almost every month (at least 10 times per year)	meeting minutes
	6c. The content of district health management team meetings and decisions are documented with clear action points	Meetings are not documented	Meetings are documented but not substantively	Meeting minutes and decisions/actions documented but do not have a timeframe or accountable agent	Meeting minutes and decisions/actions documented with a timeframe and accountable agent	Health management team meeting minutes

	6d. The DHMT is represented in key high level, cross-sector district governance meetings	The DHMT is not represented in other key district governance meeting	The DHMT has limited representation in other key district governance meetings (e.g. in exceptional cases)	The DHMT has moderate representation in other key district governance meetings (e.g. invited but meetings are irregular)	The DHMT/ has is actively engaged in key district governance meetings (e.g. standing member, regular meetings)	District governance meeting minutes
7. Ongoing data-based decision making	7a. Routine data is checked/verified by district health managers to ensure accuracy	Routine data is not checked/verified by health managers	Routine data is checked/verified on an ad hoc basis by health managers	Routine data is checked/verified by health managers infrequently (e.g. once a quarter or less) and corrective measure to improve data quality when needed is infrequent	Routine data is checked/verified by health managers on a regular basis (e.g. monthly) and corrective measures are regularly taken to improve data quality when needed	
	7b Routine data is regularly reviewed and used by district managers to inform ongoing decision making (outside the BNA process)	Routine data is not reviewed by health managers, or only reviewed during the formal BNA process	Routine data is only occasionally reviewed by health managers e.g. on an ad hoc basis and without clear action in response	Routine data is regularly analysed by health managers but there is no/limited action in response	Routine data is regularly analysed by health managers and used to inform ongoing decision making	

Appendix B: Chapter Four: Additional Tables

Table 1: Number and percent of DHMT members on the MoH registry and who responded to the survey, by DHMT position

Current Position	Registry		Respondents	
	#	%	#	%
Accountant	16	9	6	5
Director of Health & Social Services (DHSS) * team lead	27	14	15	13
District Environmental Health Officer (DEHO)	23	12	12	10
District Health Promotion Officer (DHPO)	24	13	12	10
District Health Services Administrator (DHSA)	22	12	14	12
District Medical Officer (DMO)	23	12	18	15
District Nursing Officer (DNO)	24	13	21	18
Human Resources Management Officer (HRMO)	17	9	10	9
Pharmacist	12	6	9	8
Total	188	100	117	100

Table 2: Number and percent of survey respondents, by DHMT position type and gender

		Female	Male	Total
Accountant	#	2	4	6
	%	33	67	
DEHO	#	1	11	12
	%	8	92	
DHSA	#	5	9	14
	%	36	64	
DHPO	#	3	9	12
	%	25	75	
DHSS	#	2	13	15
	%	13	87	
DMO	#	8	18	26
	%	31	69	
DNO	#	18	3	21
	%	86	14	
HRMO	#	3	7	10
	%	30	70	
Pharmacist	#	1	0	1
	%	100	0	
Total	#	43	74	117
	%	37	63	

Table 3: DHMT positions present in MoH contact list, by district

	Acct	DEHO	DHSA	DHSS	DMO	DNO	DHPO	HRMO	Pharm	Total
Northern Zone										
Chitipa	0	1	1	1	1	1	1	1	0	7
Karonga	1	1	1	1	1	1	1	1	1	9
Mzimba North	1	1	1	1	1	1	1	0	1	8
Mzimba South	1	1	1	1	1	0	1	0	1	7
Nkhata Bay	1	1	1	1	1	1	1	1	1	9
Rumphi	1	1	0	1	1	1	1	1	0	7
Central Zone										
Dedza	1	1	1	1	1	1	1	1	1	9
Dowa	1	1	1	1	1	1	1	1	1	9
Kasungu	1	1	1	1	1	1	1	0	0	7
Lilongwe	0	0	1	1	1	1	1	0	0	5
Mchinji	0	1	1	1	0	1	1	0	0	5
Ntcheu	1	1	1	1	1	1	1	1	1	9
Ntchisi	1	1	0	1	0	1	1	1	0	6
Salima	0	1	1	1	1	1	1	1	0	7
Southern Zone										
Balaka	0	0	0	1	1	0	1	0	0	3
Blantyre	0	1	1	1	1	1	1	1	0	7
Chikwawa	1	1	1	1	1	1	1	0	1	8
Chiradzulu	1	1	1	1	1	1	0	1	1	8
Machinga	0	1	1	1	1	1	1	1	0	7
Mangochi	0	1	0	1	0	0	0	0	0	2
Mulanje	0	1	1	1	1	1	1	1	0	7
Mwanza	1	0	1	1	1	1	1	1	0	7
Neno	1	1	1	1	0	1	1	1	1	8
Nsanje	1	1	1	1	1	1	1	1	1	9
Phalombe	0	1	0	1	1	1	0	0	0	4
Thyolo	1	1	1	1	1	1	1	0	1	8
Zomba	1	1	1	1	1	1	1	1	0	8
Total	17	24	22	27	23	24	24	17	12	190

*includes 2 individuals from Neno district who were eliminated from the sample sample used for analysis due to faulty email addresses.

Table 4: Mean and median years in current post, in management roles and in the health field by DHMT position type

DHMT staff type	Current Post			Health Management Role			Health field		
	Mean	Median	N	Mean	Median	N	Mean	Median	N
Accountant	2.3	1.0	6	4.0	2.0	5	-	-	-
DEHO	8.6	7.0	12	10.6	9.0	12	22.7	23.0	12
DHSA	6.5	6.5	14	8.3	7.0	13	9.4	7.0	14
DHPO	10.3	9.0	12	8.5	9.0	11	15.4	16.5	12
DHSS	3.8	3.5	14	8.3	7.0	12	12.3	9.0	15
DMO	3.2	3.0	18	3.4	3.0	17	6.3	5.5	18
DNO	6.0	4.0	20	7.2	7.0	21	17.1	16.5	20
HRMO	4.8	2.5	10	8.7	2.5	10	6.0	2.5	8
Pharmacist	3.1	4.0	1	3.1	6.0	1	5.6	16.0	1
ALL	5.5	4	115	7.1	6	109	12.3	9.5	108

Table 5: Mean number of years in current post, district management and health field among DHMT doctors and non-doctors

	Doctor mean	Non-doctor mean	P-value
Year in current post	3.4	6.4	0.00
Years in district management	5.5	7.7	0.13
Years in health field*	9.0	13.7	0.01

*Does not include accountants

Table 6: Number and percentage of respondents in their position in acting and official capacities, by DHMT position type

DHMT Staff type		Acting	Official
DHPO	#	2	10
	%	17	83
DHSA	#	3	11
	%	21	79
DHSS	#	5	10
	%	33	67
DMO	#	9	9
	%	50	50
All other	#	0	76
	%	0	100
Total	#	20	96
	%	17	83

n=116

Table 7: Amount of time DHMT doctors report providing direct clinical care in the last year

DHMT staff type		Very little time	Less than half of my time	Around half of my time	Most of my time	All of my time	n
DHSS	#	4	4	2	0	0	10
	%	40	40	20	0	0	
DMO	#	4	7	3	3	0	17
	%	24	41	18	18	0	
Total	#	8	11	5	3	0	27
	%	30	41	19	11	0	

Table 8: Amount of time DHMT members report spending on management activities in the last year, by DHMT position

		Very little time	Less than half of my time	Around half of my time	Most of my time	All of my time	n
Accountant	#	1	0	1	3	1	6
	%	17	0	17	50	17	
DEHO	#	0	0	3	9	0	12
	%	0	0	25	75	0	
DHSA	#	1	0	4	7	2	14
	%	7	0	29	50	14	
DHPO	#	0	0	6	6	0	12
	%	0	0	50	50	0	
DHSS	#	0	1	3	10	1	15
	%	0	7	20	67	7	
DMO	#	1	1	4	11	1	18
	%	6	6	22	61	6	
DNO	#	0	1	6	13	0	20
	%	0	5	30	65	0	
HRMO	#	1	0	0	7	1	9
	%	11	0	0	78	11	
Pharmacist	#	0	1	0	7	0	8
	%	0	13	0	88	0	
Total	#	4	4	27	73	6	114
	%	4	4	24	64	5	

Table 9: Percent of DHMT members reporting regular use of communication tools, such as circulars, DHIS2, LMIS, iHRIS, and IFMIS to perform their management roles (percentage), by DHMT position type

	Comms tools		DHIS2		LMIS		iHRIS		IFMIS	
	SD, D, NAND	SA, A	SD, D, NAND	SA, A	SD, D, NAND	SA, A	SD, D, NAND	SA, A	SD, D, NAND	SA, A
Accountant	40	60	60	40	100	0	60	40	17	83
DEHO	8	92	0	100	75	25	58	42	83	17
DHA	14	86	29	71	43	57	38	62	43	57
DHPO	9	91	25	75	92	8	100	0	83	17
DHSS	43	57	33	67	20	80	53	47	27	73
DMO	22	78	28	72	17	83	78	22	83	17
DNO	15	85	14	86	60	40	44	56	80	20
HRMO	11	89	33	67	89	11	40	60	44	56
Pharmacist	25	75	75	25	11	89	89	11	88	13
Total	20	80	28	72	50	50	62	38	64	36
	n=111		n= 114		n=113		n=112		n=114	
*SD, D, NAND = Strongly disagree, disagree and neither agree nor disagree										
** SA or A = Strongly agree and agree										

Table 10: Number and percent of DHMT members who report having and seeing their written job description, by DHMT position type

DHMT staff type		No	Yes	N
Accountant	#	0	6	6
	%	0	100	
DEHO	#	0	12	12
	%	0	100	
DHA	#	1	13	14
	%	7	93	
DHPO	#	0	12	12
	%	0	100	
DHSS	#	0	15	15
	%	0	100	
DMO	#	3	15	18
	%	19	81	
DNO	#	5	16	21
	%	24	76	
HRMO	#	0	10	10
	%	0	100	
Pharmacist	#	2	7	9
	%	22	78	
Total	#	11	106	117
	%	9	91	

Table 11: Reported level of agreement with the statement “I understood what was expected of me in my current job when I started the role”, by DHMT position type

		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree	n
Accountant	#	0	0	0	3	3	6
	%	0	0	0	50	50	
DEHO	#	2	0	0	3	6	11
	%	18	0	0	27	55	
DHA	#	0	1	1	8	4	14
	%	0	7	7	57	29	
DHPO	#	1	2	0	6	3	12
	%	8	17	0	50	25	
DHSS	#	4	3	0	3	5	15
	%	27	20	0	20	33	
DMO	#	3	7	4	3	1	18
	%	17	39	22	17	6	
DNO	#	2	4	3	10	2	21
	%	10	19	14	48	10	
HRMO	#	0	3	1	6	0	10
	%	0	30	10	60	0	
Pharmacist	#	2	2	2	1	2	9
	%	22	22	22	11	22	
Total	#	14	22	11	43	26	116
	%	12	19	9	37	22	

Table 12: Reported level of agreement with the statement “I understand what was expected of me in my current job now”, by DHMT position type.

		Strongly disagree	Disagree	Neither agree, nor disagree	Agree	Strongly Agree	n
Accountant	#	0	0	0	3	3	6
	%	0	0	0	50	50	
DEHO	#	1	1	0	2	8	12
	%	8	8	0	17	67	
DHA	#	0	0	0	5	9	14
	%	0	0	0	36	64	
DHPO	#	1	0	0	4	7	12
	%	8	0	0	33	58	
DHSS	#	5	0	1	1	8	15
	%	33	0	7	7	53	
DMO	#	1	1	3	10	10	18
	%	6	6	17	56	56	
DNO	#	3	0	0	8	10	21
	%	14	0	0	38	48	
HRMO	#	1	0	0	6	2	9
	%	11	0	0	67	22	
Pharmacist	#	2	0	0	3	4	9
	%	22	0	0	33	44	
Total	#	14	2	4	42	54	116
	%	12	2	3	36	47	

Table 13: Extent to which DHMT members feel their job descriptions reflect what they actually do, by DHMT position type

		Strongly disagree	Disagree	Neither agree, nor disagree	Agree	Strongly agree	n
Accountant	#	0	0	0	4	2	6
	%	0	0	0	67	33	
DEHO	#	2	0	1	5	4	12
	%	17	0	8	42	33	
DHA	#	0	1	3	7	2	13
	%	0	8	23	54	15	
DHPO	#	0	1	2	8	1	12
	%	0	8	17	67	8	
DHSS	#	2	4	1	4	4	15
	%	13	27	7	27	27	
DMO	#	2	3	4	3	2	14
	%	14	21	29	21	14	
DNO	#	1	1	0	11	3	16
	%	6	6	0	69	19	
HRMO	#	1	0	1	6	2	10
	%	10	0	10	60	20	
Pharmacist	#	2	1	0	3	1	7
	%	29	14	0	43	14	
Total	#	10	11	12	51	21	105
	%	10	10	11	49	20	

Table 14: How much authority respondents reported that their DHMTs had to make decisions about health system management in their district in the last year, by DHMT position type

Current Position		None	Little	Some	Much	A great deal	n
Accountant	#	0	1	0	4	1	6
	%	0	17	0	67	17	
DEHO	#	0	0	4	4	4	12
	%	0	0	33	33	33	
DHA	#	0	1	3	8	2	14
	%	0	7	21	57	14	
DHPO	#	0	1	3	5	3	12
	%	0	8	25	42	25	
DHSS	#	0	2	8	4	1	15
	%	0	13	53	27	7	
DMO	#	0	1	6	7	3	18
	%	0	6	35	41	18	
DNO	#	0	3	6	10	2	21
	%	0	14	29	48	10	
HRMO	#	0	2	2	3	3	10
	%	0	20	20	30	30	
Pharmacist	#	0	1	4	4	0	9
	%	0	11	44	44	0	
Total		0	12	36	49	19	117
		0	10	31	42	16	

Table 15: Reported frequency of formal or informal check-ins with managers among DHSS and all other DHMT members

Current Position		Almost never	About annually	About 6-monthly	About quarterly	About monthly or more frequently	Other	n
DHSS	#	2	1	0	7	5	0	15
	%	13	7	0	47	33	0	
Other DHMT	#	13	10	7	22	44	2	98
	%	13	10	7	22	45	2	
Total	#	15	11	7	29	49	2	113
	%	13	10	6	26	43	2	

Table 16: Reported level of agreement with the statement “Check-ins with my supervisor help me do my job better,” among DHSS and all other DHMT members

Current Position		Strongly Disagree	Disagree	Neither Agree, Nor Disagree	Agree	Strongly Agree	n
DHSS	#	0	0	1	8	5	14
	%	0	0	7	57	36	
Other DHMT	#	4	3	9	51	32	99
	%	4	3	9	52	32	
Total	#	4	3	10	59	37	113
	%	4	3	9	52	33	

Table 17: DHMT respondents indicating that seek advice from colleagues or peers about management challenges they encounter through formal and informal means, by DHMT staff type

DHMT staff type		No	Yes			Total
			(formal)	(informal)	(both)	
Accountant	#	0	2	0	4	6
	%	0	33	0	67	
DEHO	#	0	1	1	10	12
	%	0	8	8	83	
DHA	#	0	0	1	13	14
	%	0	0	7	93	
DHPO	#	0	0	1	10	11
	%	0	0	9	91	
DHSS	#	1	0	1	13	15
	%	7	0	7	87	
DMO	#	0	1	2	15	18
	%	0	6	11	83	
DNO	#	1	2	2	16	21
	%	5	10	10	76	
HRMO	#	0	1	0	8	9
	%	0	11	0	89	
Pharmacist	#	0	0	0	9	9
	%	0	0	0	100	
Total	#	2	7	8	98	115
	%	2	6	7	85	

Table 18: DHMT respondents indicating that seek advice from colleagues or peers about management challenges they encounter through formal and informal means, by zone

zone		No	Yes			n
			(formal)	(informal)	(both)	
Central	#	1	1	3	20	25
	%	4	4	12	80	
Northern	#	0	3	1	31	35
	%	0	9	3	89	
Southern	#	1	3	4	47	57
	%	2	5	7	85	
Total	#	2	7	8	98	115
	%	2	6	7	85	

Table 19: Extent to which DHMT members agree that DHMT positions are considered desirable in the Malawi health service, by DHMT position type

		Strongly disagree	Disagree	Neither agree, nor disagree	Agree	Strongly agree	n
Accountant	#	0	0	1	3	2	6
	%	0	0	17	50	33	
DEHO	#	0	0	1	9	2	12
	%	0	0	8	75	17	
DHSA	#	1	0	3	5	4	13
	%	8	0	23	38	31	
DHPO	#	1	1	0	9	1	12
	%	8	8	0	75	8	
DHSS	#	0	0	3	11	1	15
	%	0	0	20	73	7	
DMO	#	1	0	5	7	5	18
	%	6	0	28	39	28	
DNO	#	0	3	4	13	1	21
	%	0	14	19	62	5	
HRMO	#	0	1	1	7	1	10
	%	0	10	10	70	10	
Pharmacist	#	0	2	0	7	0	9
	%	0	22	0	78	0	
Total	#	3	7	18	71	17	116
	%	3	6	16	61	15	

Table 20: Reported level of satisfaction with current job, by DHMT position type

DHMT staff type		Very dissatisfied	Dissatisfied	Neither satisfied, nor dissatisfied	Satisfied	Very satisfied	n
Accountant	#	1	0	3	2	0	6
	%	17	0	50	33	0	
DEHO	#	2	1	3	6	0	12
	%	17	8	25	50	0	
DHA	#	1	6	4	3	0	14
	%	7	43	29	21	0	
DHPO	#	0	2	8	2	0	12
	%	0	17	67	17	0	
DHSS	#	2	7	2	4	0	15
	%	13	47	13	27	0	
DMO	#	5	6	7	0	0	18
	%	28	33	39	0	0	
DNO	#	4	11	4	1	0	21
	%	20	55	20	5	0	
HRMO	#	0	4	3	2	1	10
	%	0	40	30	20	10	
Pharmacist	#	1	5	1	2	0	9
	%	11	56	11	22	0	
Total	#	16	42	35	22	1	116
	%	14	36	30	19	1	

Table 21: How likely DHMT members report that high performing DHMTs have access to the following

	Increased Budget		Recognition		Career Advancement		Learning Opportunities		Decision Making Independence	
	#	%	#	%	#	%	#	%	#	%
Very unlikely	33	29	23	20	27	24	20	17	14	12
Somewhat unlikely	9	8	11	10	7	6	10	9	8	7
Neither likely nor unlikely	13	11	8	7	17	15	11	10	15	13
Somewhat likely	21	18	30	27	25	22	24	21	29	25
Very likely	25	22	32	28	28	25	41	36	46	40
Not sure	13	11	9	8	10	9	9	8	2	2
n	114		113		114		115		114	

Table 22: The extent to which DHMT members agree that career advancement opportunities are linked to the following factors

	Health worker cadre		Personal connections		Time in govt		Mgmt potential		Job performance		Respect of colleagues		Gender	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Strongly agree or agree	77	66	69	61	50	43	48	42	46	39	39	34	21	18
Neither agree, nor disagree	16	14	22	19	22	19	33	29	16	14	40	35	32	28
Strongly disagree or disagree	23	20	23	20	45	38	34	30	55	47	36	31	62	54
n	116		114		117		115		117		115		115	

Table 23: DHMT member reported use of several accountability tools in the last year

Zone		Local authority performance assessment		DHMT supervision tool		DIP Action Tracker		Indiv'l Performance Appraisal	
		Yes	No or Not Sure	Yes	No or Not Sure	Yes	No or Not Sure	Yes	No or Not Sure
Total	#	104	12	89	23	63	53	37	79
	%	90	10	79	21	54	46	32	68
		n= 116		n= 116		n=112		n= 116	

Table 24: DHMT reported level of agreement with investment in indicated health management areas in the future

	Mgmt systems & tools improvement		Career Tracking		Assessment of performance		On-the-job coaching		In-service management training		Clear job descriptions		Standards for hiring managers		More peer support		Pre-service mgmt training	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Strongly disagree	6	5	6	5	6	5	7	6	7	6	7	6	2	2	7	6	8	7
Disagree	1	1	1	1	2	2	2	2	3	3	4	3	8	7	4	3	6	5
Neither agree, nor disagree	3	3	5	4	4	3	4	3	4	3	4	3	7	6	6	5	12	10
Agree	41	35	42	36	41	35	45	38	28	24	35	30	49	42	38	33	40	34
Strongly agree	65	56	62	53	63	54	59	50	74	64	67	57	51	44	61	53	51	44
Total	116	100	116	100	116	100	117	100	116	100	117	100	117	100	116	100	117	100
Strongly agree + agree (%)		91		90		90		89		88		87		85		85		78