

Reviewing Uganda's Health System Hub and Spoke Models

Final Report

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Table of Contents

Definition of Terms	5
Acronyms	6
Executive Summary	8
1 Introduction	14
1.1 Background.....	14
1.2 Ugandan health system context and efforts to improve quality of care	14
1.3 Rationale for the Assignment	20
2 Definitions.....	21
3 Methodology and Approach to Assignment	26
3.1 Study Design	26
3.2 Data Collection	27
3.3 Data Analysis and Synthesis.....	28
4 Findings of the Review.....	29
4.1 Highlights of Organisation Management models in the Uganda health system and beyond	29
4.2 The Regional Referral Hospitals	47
4.3 Learning from experiences of implementing different Organisation Management models in Uganda and beyond.....	53
5 Proposals for new/updated Organisation Management models for the Ugandan health system.....	60
Annexes.....	68
Annex 1: Concept Note on Hub and Spoke Review.....	68
Annex 2: List of Key Documents.....	68
Annex 3: List of Key Informants	68
Annex 4: Tool for Data Collection from KII	68
Annex 5: Highlights of OM models	68

List of Figures and Tables

Figures

Figure 1: Ugandan Health System Levels, Stakeholders and Responsibilities.....	15
Figure 2: Pictorial Presentation of the Hub and Spoke Concept.....	21
Figure 3: Overlapping Governance and Service Delivery Hubs and Spokes in the Ugandan health system.....	22
Figure 4: Dimensions of Supervision Monitoring and Mentoring and the relationship with the health system building blocks	24
Figure 5: Hub and Spoke Review Study Design	27
Figure 6: Option 1 Health Sector Organisation Management Structures and Mandates	61
Figure 7: Option 2 Regional Health Office with Supervision Monitoring and Mentoring and Coordination Responsibilities	64
Figure 8: Option 3 RRH with Broadened Responsibilities for Supervision Monitoring Mentoring and Coordination at the Regional Level	66

Tables

Table 1: Phase 1 Review Questions, Methods and Expected Outputs.....	27
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Definition of Terms ¹

The **Hub and Spoke** as a model for healthcare organisation refers to a network whereby the anchor site (hub) offers a full range of services complemented by secondary sites (spokes) that offer limited services. Patients that require intensive services are referred to the hub for management. We note that in the Uganda health system there are overlapping hub and spoke arrangements featuring management and service delivery structures and functions.

Supervision (Supportive) is defined as a process that promotes quality at all levels of the health system by strengthening relationships within the system focusing on the identification and resolution of problems and helping to optimise the allocation of resources.

Mentoring is a process in which an experienced individual helps another person to develop his or her goals and skills through a series of time-limited, confidential, one-on-one conversations and other learning activities.

Monitoring is the collection of routine data that measures progress toward achieving programme objectives.

Evaluation is the measurement of how well program activities have met expected objectives and/or extent to which changes in outcomes can be attributed to the programme or intervention.

Coordination is the synchronisation and integration of activities, responsibilities and command and control structures to ensure that the resources of an organisation are utilised most efficiently in pursuit of the specified objectives.

Supervision, mentoring, monitoring, evaluation and coordination are closely related functions of management, which reinforce one another to support the performance of a health system and play a key role in facilitating quality of health services. In this report, these related concepts are often referred to collectively and simply as **Supervision Monitoring and Mentoring**.

Organisation Management in this report refers to the management functions of supervision, mentoring, monitoring, evaluation and coordination, while explicitly relating them to the complexity of the health system context including the governance structures and multiplicity of stakeholders. An Organisation Management (OM) model in this regard is an approach to providing support in terms of supervision, mentoring, monitoring, evaluation and coordination in a given context.

¹This page provides a number of working definitions for this report. More detailed definitions and context are provided under section 2

Acronyms

ACP	AIDS Control Programme
AHSPR	Annual Health Sector Performance Report
ASSIST	Applying Science to Strengthen and Improve Systems (ASSIST)
CAO	Chief Administrative Officer
CHD	Community Health Department
DHIS2	District Health Information System version 2
DHO	District Health Officer
DQA	Data Quality Assessment
EGPAF	Elizabeth Glazer Paediatric AIDS Foundation
EPI	Expanded Programme for Immunisation
FCO	Focal Coordination Office
FP	Focal Person
GAVI	the Vaccine Alliance
Global Fund	The Global Fund to fight AIDS, Tuberculosis and Malaria
GLRA	German Leprosy Relief Agency
GHI	Global Health Initiative
HMIS	Health Management Information System
HPAC	Health Policy Advisory Committee
HSDP	Health Sector Development Plan
HSSIP	Health Sector Strategic and Investment Plan
HSS	Health Systems Strengthening
HS QIF &SP	Health Sector Quality Improvement Framework & Strategic Plan
IDSR	Integrated Disease Surveillance and Response
IGG	Inspector General of Government
IT	Information Technology
KI	Key Informant
KII	Key Informant Interview
LG	Local Government
LMICs	Low and middle income countries
MDG	Millennium Development Goal
MCP	Malaria Control Programme
MoH	Ministry of Health
MoFPED	Ministry of Finance Planning and Economic Development
MoLG	Ministry of Local Government
MoPS	Ministry of Public Service
NDP	National Development Plan
NHP	National Health Policy
NRH	National Referral Hospital
NTLP	National Tuberculosis and Leprosy Control Programme
OAG	Office of the Auditor General
PEPFAR	President (USA) Emergency Plan for AIDS Relief
PHP	Private Health Practitioners
PNFP	Private not For Profit
RH	Reproductive Health
RHITES	Regional Health Integration to Enhance Services
RRH	Regional Referral Hospital
RPMTs	Regional Performance Monitoring Teams
SDG	Sustainable Development Goal
SMM	Supervision Monitoring and Mentoring
TB	Tuberculosis
UHC	Universal Health Coverage
UHSCM	Uganda Health Supplies Chain Management
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund

USAID
WHO

United States Agency for International Development
World Health Organisation

Executive Summary

The objective of the Ugandan health system is to provide Universal Health Coverage (UHC) to all the population, an important aspect of which is access to good quality services. It is composed of various stakeholders with different mandates operating at different levels. For the achievement of UHC, an appropriately structured health system is required to support maximisation of health outputs and outcomes through minimising inefficiencies, duplication and inequity. To-date there are concerns about the quality of care provided in the public and private sub-sectors of the Ugandan health system.

In the past, Uganda health system stakeholders used a number of approaches and models to provide support to Local Governments (LGs) and health facilities for the purpose of improving coverage of the population with quality health services. A number of such models are still operational. In the recent past interest in reviving/refreshing, this aspect has grown.

The United States Government (USG) and its agencies are key stakeholders in the Uganda health system, given the level of financial and technical investment they provide generally and specifically for quality of care initiatives. The USG is supporting a process to review current (and past) efforts by the different players in the Ugandan health system to support LGs and health facilities to provide good quality health care.

The *purpose* of the assignment was to review Uganda's system for managing the decentralised health services as they relate to the conceptual related Hub and Spoke models. The specific interest of USG was to clarify opportunities, challenges and experiences of current systems, and thus inform the development of an enhanced United States Agency for International Development (USAID) regional programming strategy. The review is of interest to all stakeholders supporting the Uganda health system since any system-wide model would have implications for all of them. The review focuses on the public sector including the Private not for Profit facility based health services providers.

The *objectives* of the review were to:

- A. Describe current systems as they relate to potential Hub and Spoke models in Ugandan health system today (and in the recent past), identify opportunities and limitation;
- B. Review global models for managing health services with particular focus on experiences from Low and Middle Income Countries (LMICs) with decentralised governance systems.
- C. Identify factors that influence the functionality of existing and potential Hub and Spoke models in Uganda, along with key challenges and facilitating factors.

- D. Propose new/updated models for the Ugandan health system, taking into consideration the current Ugandan context; identified challenges; facilitating factors; and the different stakeholders' roles and responsibilities.

The consultant developed working definitions for a number of terms/phrases that are used frequently in this report including Hub and Spoke; supervision, mentoring, monitoring and evaluation; coordination; and Organisation Management.

The Hub and Spoke model generally refers to an anchor site offering a full range of clinical services complemented by secondary sites that offer limited services. In addition, in the typical model, the hub usually has management mandate over the spokes- often referred to as command and control. In the Ugandan health system however, governance/management and service delivery structures coexist and present overlapping hubs and spokes. Given decentralisation, the governance/management structure runs from the national level through the LGs (including districts) and the lower LGs. The health service delivery structure on the other hand is a tiered arrangement from the health centre (HC) I (virtual) through the HC II, III and IV, the General Hospital (GH), Regional Referral Hospital (RRH) and National Referral Hospital (NRH). The complexity and range of services increase from the HC I providing preventive services to the NRHs providing tertiary services, and lower level facilities refer upwards. Different stakeholders have decision-making power over various aspects of the Ugandan health system.

Organisation Management (OM) is used in this report to refer to different approaches to the application of the management functions of supervision, mentoring, monitoring and evaluation, and coordination in a given context. The implementation of supervision, mentoring, monitoring and evaluation and coordination acts through the health system building blocks as defined by WHO, to support the delivery of good quality services at the LG and health facility levels. The six WHO health system building blocks are governance and leadership, supply chain and health commodities, information management, health financing and service delivery. The WHO health system building blocks can be reconfigured into 4 dimensions, in terms of providing support to LGs and health facilities: policy engagement, health systems management, technical programme management, and support for provision of clinical services. The roles of different stakeholders vary across the dimensions given their governance/management and service delivery mandates.

In order to ensure response to all the objectives of the assignment, the consultant proposed a phased approach. In the first phase, documented in this report, the consultant reviewed past and current OM models with a view to developing proposals for updated models. Ministry of Health (MoH) operated models; health system models operated by other stakeholders; models operated in Uganda in other

sectors; models operated in other LMICs; and those operating Hub and Spoke models were reviewed. This involved literature and selected Key Informant interviews. Data analysis was conducted to extract common themes and highlight differences while identify facilitating and inhibiting factors.

The review noted a number of similarities within the different categories and differences across the categories of OM models, as highlighted below:

- The MoH managed system-wide OM models, the Area Teams and Regional Performance Monitoring Teams had a number of similarities. These were coverage of all supervision, mentoring, monitoring and evaluation dimensions with bias towards policy engagement and system management; and alignment with the context including governance arrangements and routine procedures like planning and budgeting and data/information management. These models are acceptable to the LG managers and support decision-making at different levels. However, in the medium to long term, the models' effectiveness declines due to poor resourcing (human, financial and logistical), poor follow-up of findings and minimal focus on technical support for clinical services delivery.
- The MoH programme-specific models, the TB/Leprosy Zonal Officers as well as the Regional Pharmacists aligned to the context with specific programme adaptations to routine government procedures. The programme-specific OM models were well resourced in the medium term; championed by programme managers and development partners; and were seen as effective. However, this approach was noted to be inequitable as only a few programmes had the capacity to run such, and the parallel structures were inefficient.
- The RHITES South West OM model, the District Based Teams (DBTs), implemented by an Implementing Partner emphasised technical programme management and support for clinical care and is well resourced in terms of human, financial and logistical resources. The model is effective in improving health worker competence, but faces challenges feeding into broader decision-making given poor alignment with governance and LG routine procedures. Sustainability of such a model beyond the project cycle will be challenging.
- The OM models implemented by the Uganda Police Force and the Inspectorate of Government highlighted approaches by sectors or entities that have not been devolved but operate regional and lower level structures under the direct management of the national level.
- OM models studied in Ghana and Tanzania are at the regional level. These models exhibited a number of similarities with the MoH managed system-wide OM models.
- The OM models from India and the United States of America studied provided examples of a typically hub and spoke model. They were illustrative of the

private sector, with focus on supporting clinical care and maximising efficiency for the proprietor and patient/client.

- RRHs in Uganda provide services beyond the hospital including providing support to the GHs and HCs. The Community Health Department coordinates this support. The support tends to be sporadic and beset by several challenges including inadequate human, financial and logistical resources and mismatch of these health system functions with the governance/management mandate of the RRHs. RRHs have major challenges with meeting their basic responsibilities of tertiary clinical care as shown by the magnitude and quality of performance. This is likely due to the limited resources and gaps in management and supervision.
- With the support of some Implementing Partners, hub and spoke approaches have been utilised to strengthen the delivery of particular services like HIV/AIDS laboratory services -with the RRHs (and some GHs) acting as hubs and the GHs and HCs as spokes. The HSD has its headquarters at the GH or HCIV, and responsibility for both management and service delivery in the area is another example.

The consultant used the findings in consideration of the Ugandan context to learn lessons. The lessons learnt from the different experiences include the following:

- The Uganda health system has various management and service delivery structures expected to work together for optimal service delivery. The different stakeholders have varying mandates, responsibilities and comparative advantages.
- The alignment of an OM model with the context, including management and service delivery structures, has implications for its acceptability, effectiveness and sustainability.
- There are challenges in balancing the different dimensions of supervision mentoring monitoring evaluation and coordination (policy engagement, systems management, technical programming and clinical care) in single OM models.
- The increase in the number of LGs in Uganda has created functional and geographical distance from the centre and increased the amount of resources required for OM activities. Other decentralised countries have addressed this by creating an intermediary level, the regional level. Some sectors in the country have also used this approach.
- There is lack of clarity and coherence with regard to the RRHs involvement in the health system beyond the hospital. Notably in legal and policy provisions, roles and responsibilities, structures and resources.
- OM models need to be well developed with clear articulation of the OM interaction with health system management functions and in decision-making. The roles and responsibilities of different stakeholders need to be explicit.

- Resources for supervision and related functions in the Ugandan health system are inadequate especially within government entities;
- The Uganda health system exhibits challenges with the follow up and use of information from supervision, mentoring, monitoring and evaluation engagements for decision-making.

Based on the findings and lessons learnt, the consultant makes the following proposals for new/updated OM models:

Model 1: Reinforce current structures and mandates

In this model, the focus is on reinforcement of current systems/structures for supervision, mentoring, monitoring and evaluation and coordination. The main structures to be involved would be the Area Teams (or updated modality) and RRHs. Key actions for improvement would be the provision of adequate resources, improved supervision of the Teams' activities throughout the health system, including emphasis on follow up of findings. Adjustments in the medium to long term would include integrating support from the various programmes of the MoH into this comprehensive modality and the transition from the provision of direct support by Development Partners and Implementing Partners to LGs and health facilities to providing support through the MoH and RRHs. This model does not require the creation of new structures or promulgation of legal instruments and policies. However it may not provide enough impetus for positive change; it does not address the issue of increased number of LGs and how they interface with the centre and may be seen as 'business as usual'.

Model 2: Establish a Regional Health Office

This model involves the establishment of a Regional Health Office (RHO) for the coordination of all *health system* activities at regional level, including the management functions of supervision, mentoring, monitoring, evaluation and coordination and multi-sectoral collaboration. The RRHs play a key role by providing support for clinical care at the GHs and HCs working closely with the RHO. The model responds to the need created by the increase in the number of LGs to have an intermediate structure for supporting the management of the health system at the regional level. The creation of the RHOs would require significant buy-in from several stakeholders and policy guidelines for their operationalisation. It is possible though to introduce RHOs without a political structure at the regional level as other sectors have done it, using administrative approaches. This model requires substantial new resources. This model has the potential to revolutionise and improve the management of the health system given its explicit consideration of the governance/management and clinical care functions. This model would facilitate the broader positioning of the regional health system beyond clinical care, to incorporate public health aspects, and provide a platform to coordinate the response to social determinants of health. In

effect this option supports closer overlap and interaction of the two hubs of clinical service delivery, and decentralised management of the health system.

Model 3: Broaden the mandate of the Regional Referral Hospitals

For this model, posits an extension of the mandate, roles and responsibilities of the RRHs to cater for the management functions of supervision, mentoring, monitoring, evaluation and coordination, across the clinical, programmatic, systems management and policy engagement dimensions. In addition, the RRHs would be responsible for the broader responsibilities of coordinating health system activities at this level, including public health and disease surveillance, and a multi-sectoral approach to health issues. In effect, the RRH would act as a RHO in addition to its clinical role as a tertiary health facility. This is a major shift in terms of governance, as the mandates and interactions between the national level (MoH) and the regional level (RRHs) would change. Similarly, the interaction between the RRHs and the LGs would change. The operationalisation of this model would require a new legal/policy instrument, thus the need for the concurrence of several stakeholders. Substantial additional resources would be required to implement such a model that is the closest to the typical definition of a hub and spoke, as it combines both the clinical service delivery and management functions leadership at the RRHs. Given the current approach to decentralisation, this model may meet with resistance at both the LG and national levels. The option would require extensive adjustment to the legal/policy framework, management structures, resourcing and responsibilities of the RRHs.

Going forward, we recommend that in order to leverage Universal Health Coverage, including good quality health care, in an efficient and sustainable manner:

1. The MoH and Uganda health system stakeholders should develop a comprehensive, strategic and acceptable approach to OM that will galvanise appropriate action from the different stakeholders in the Ugandan health system.
2. USAID as a major player in the Ugandan health system should utilise its privileged position to engage and interest the MoH in steering a discussion among stakeholders on revitalising the management functions of supervision, mentoring, monitoring, evaluation and coordination and specifically adopting a new/updated OM model to be used. In the short to medium term, USAID should:
 - a) Discuss and internalise proposals for future OM models for Uganda;
 - b) Support processes for wider stakeholder consultation on proposed OM models;
 - c) Facilitate the process to provide detailed information on resource requirements and feasibility of the proposed OM models.

1 Introduction

1.1 Background

According to the Health Sector Development Plan (HSDP) 2015/16 to 2019/2020, the goal of the Uganda health system is 'to facilitate the attainment of a good standard of health by all people of Uganda in order to promote a healthy and productive life'. This goal is expected to be achieved through Universal Health Coverage (UHC) which refers to the state where all people in a country can access the health services they need, of sufficient quality, without being exposed to financial hardship. Uganda health system stakeholders have identified major gaps in the quality of health services available to the Ugandan population to-date. Factors contributing to this include limited financial resources as well as the organisation and management of health services.

The United States Government (USG) working through a number of agencies is an important player in the Uganda health system. The USG has provided financial and technical support across a range of programmes and institutions in the Ugandan health system, including initiatives targeted specifically at improving the quality of care accessed by the population.

1.2 Ugandan health system context and efforts to improve quality of care

This section provides a brief review of Uganda's health system context, focusing on aspects relevant to this assignment including highlights of the governance framework, as well as the constituent programmes and stakeholders in the health system. It also covers some models and approaches that have been utilised for the purpose of improving the quality of health services.

1.2.1 The Uganda health system context

The Uganda health system encompasses the public and non-public sectors. It is composed of various programmes and institutions providing preventive, promotive, curative and rehabilitative services relating to various communicable and non-communicable diseases and health conditions. Various programmes and institutions support the different building blocks of the health system as designated by WHO namely medicines and commodities; information management; health financing, health workforce, leadership/governance and service delivery. There are different governance/management and service delivery levels in the Uganda health system. Broadly, the Ugandan health system is composed of various stakeholders with

different mandates operating at different levels. Some aspects of the health system architecture deemed relevant to this assignment are highlighted below, particularly the various relationships as Figure 1 below illustrates.

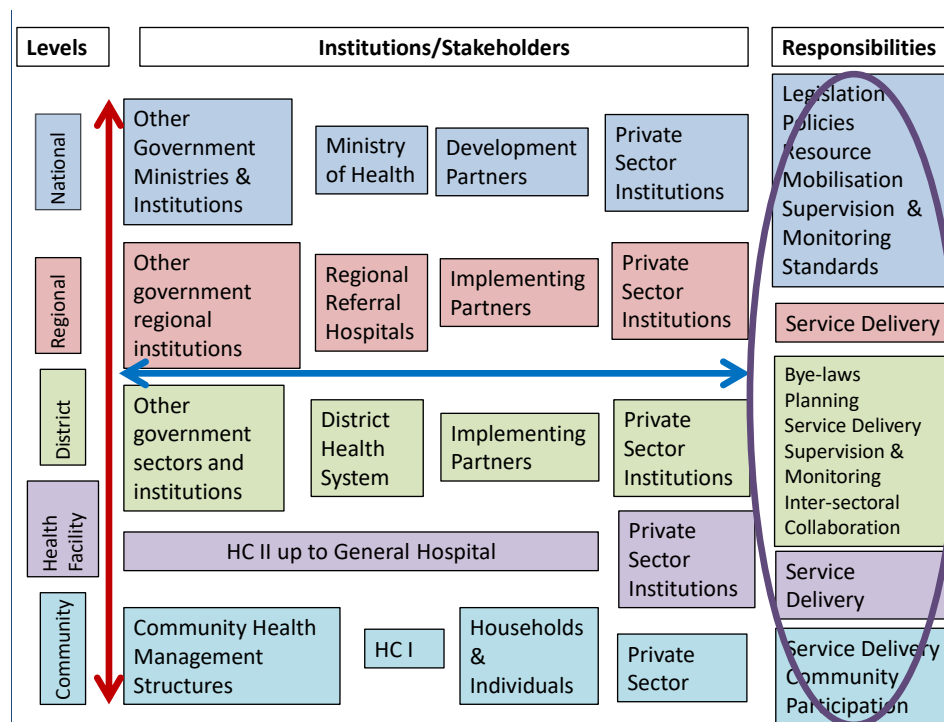


Figure 1: Ugandan Health System Levels, Stakeholders and Responsibilities

Legislative and policy documents determine the mandates, roles and responsibilities of the various generic and health system stakeholders. Uganda is under decentralisation, specifically the devolution model, with political, administrative and technical authority at central and local government levels. The different levels of government have different mandates. The national level, including the Ministry of Health (MoH) is responsible for policy formulation, strategic planning, macro level resource mobilisation and allocation, standard setting, supervision, capacity building, as well as monitoring and evaluation. The LG level is further subdivided into districts and city councils; as well as lower local governments (LLGs) which include municipalities, sub counties, divisions and town councils; and administrative units which include parishes and villages. The LGs and LLGs have responsibility for operational planning, resource mobilisation and allocation, management, service delivery and supervision and monitoring. The administrative units have the responsibility for service delivery and leveraging community participation.

The district is the key LG structure relating to the central level and expected to provide linkage to the LLGs. The last two decades has seen a marked increase in the number of LGs, LLGs and administrative units in the country. The number of districts increased from 39 in 1993, to 45 in 1997, 56 in 2000 and 112 in 2011. Parliament has

approved the creation of an additional 23 districts that will be operational by 2020, totalling to 135 districts. The number of sub-counties increased from 884 to 1,132 between 2010 and 2014, while the parishes increased from 5,238 to 7,241 over the same period. The large number of LGs has marked implications for coordination between the different health system stakeholders, including between central government entities like the MoH and the districts; and between the LGs and the LLGs; as well as administrative facilities and the health facilities. The regional level of government, though provided for by the 2006 Constitutional amendment, is not operational.

The public health sector has elaborated levels of service delivery namely: National Referral Hospitals (NRHs), Regional Referral Hospitals (RRHs), General Hospitals (GHs), Health Centre IVs (HC IVs), Health Centre IIIs (HC IIIs), Health Centre IIs (HC IIs) and Health Centre Is (HC Is). The complexity of services provided increases from the HC Is to the NRHs. The HC Is are virtual units providing preventive and health promoting services while the HC IIs provide first line curative and preventive services. In addition to basic curative and preventive services, the HC IIIs and HC IVs provide laboratory and inpatient services. HC IV facilities provide basic general and obstetric surgery plus blood transfusion services. Hospitals offer services provided at the lower levels as well as specialised services of increasing complexity from the GHs to the NRHs. Referral provided from the lower higher levels of care is in line with the hierarchy indicated. The health sub-district (HSD) strategy was introduced in 2000 whereby in each constituency, the GH or HCIV if the former did not exist, was designated the headquarters. The intention of the HSD is to take the management of health services closer to the population, and combine the management of preventive, promotive and curative services. The HSD was a sector specific innovation, as there was no matching LG or LLG at this level.

A number of multilateral and bilateral organisations collectively referred to as Development Partners (DPs), are active in health internationally and in Uganda. They include The Belgian Government, Department for International Development (DfID) of the United Kingdom – more recently referred to as UKAid, United Nations Children's Fund (UNICEF), United Nations Population Fund (UNFPA), United States Agency for International Development (USAID), the World Bank and the World Health Organisation (WHO). Over the last two decades, new public and private institutions have been established at the international level to provide financing and technical support for the goal of improving population health. A number of the institutions referred to as Global Health Initiatives (GHIs) including the Vaccine Alliance (GAVI), the Global Fund, The President's Emergency Programme for AIDS Relief (PEPFAR) and the Bill and Melinda Gates Foundation are active in Uganda. The DPs contribute substantial resources to the Ugandan health system through public and private institutions.

A number of public institutions play a key role in the Uganda health system including: Ministries such as the MoH, Ministry of Finance Planning and Economic Development (MoFPED), Ministry of Public Service (MoPS) and Ministry of Education (MoES); other central level institutions like the Health Service Commission and the National Medical Stores; LGs and health facilities. The MoH is structured along a number of disease control and health system support programmes like the AIDS Control Programme (ACP), the Malaria Control Programme (MCP), the National TB and Leprosy Control Programme (NTLP), the Reproductive Health (RH) Programme, the Uganda National Expanded Programme for Immunisation (UNEPI), Pharmacy Division, Planning and Quality Assurance and Departments among others.

International and local private organisations are active in the Ugandan health system. Selected IPs in Uganda include Baylor Uganda, Belgian Technical Corporation (BTC)/Enabel, Elizabeth Glaser Paediatric AIDS Foundation (EGPAF), Intra Health, Management Sciences for Health (MSH), Social and Scientific Systems (SSS) and The AIDS Support Organisation (TASO). The IPs operate at various levels of the health system, including the national, regional, district, health facility and community levels. Other private health organisations include Non-Governmental Organisations (NGOs), Community Based Organisations (CBOs) and privately owned health facilities. The privately owned health services providers include the facility based private not for profit (PNFP) and the Private Health Practitioners (PHPs). Whereas the PNFPs facilities follow a similar nomenclature to that of the public facilities, the PHPs operate at the level of hospitals, nursing homes, clinics, pharmacies and drug shops.

The Uganda health system therefore is composed of various stakeholders with differing objectives and mandates, who contribute to the quality health services accessed by the population across the country. In the Health Sector, there is no particular institution that has absolute control over decisions in the sector. The shared responsibility for sector performance calls for certain governance/management arrangements and linkages between the different levels and stakeholders to ensure an effective health system. These relationships operate both in the vertical and horizontal dimensions as illustrated in **Figure 1**. The government at the different levels has a key stewardship responsibility.

1.2.2 Models and approaches that facilitate improvements in quality of care

The complexity of the Ugandan health system has created a need for approaches to ensure good quality health care across the country, in the context of available resources. A few of the approaches are highlighted here. The models and approaches referred to here are those that have operated in the public and PNFP sub-sectors of the Ugandan health system.

Since the mid-90s and the introduction of the current model of decentralisation, the MoH has used a number of approaches to provide oversight and support to the LGs and the public and PNFP health facilities to ensure good quality of care. Beginning in the mid-90s, MOH constituted Quality Assurance Teams (QATs) constituted at the national level. These teams included senior officials from the Ministry and other national level institutions including Mulago and Butabika National Referral Hospitals. Each of the teams provides clinical quality of care related support to a number of designated districts.

During the late 90s, it was necessary to provide health system management related support to the LGs and health facilities. The country constituted four regions and individuals with health system management skills were designated Regional Health Planners (RHPs). The RHPs provided support for policy, planning and management to the allocated districts. Subsequently the RHPs, together with financial management specialists, monitored the Primary Health Care Conditional Grant (PHC CG). This extended the responsibility of the team to include financial and performance management. In 2003, Area teams were formed which consolidated the QATs, RHPs and PHC CG Monitoring approaches. The Area Teams were composed of officials from different programmes at the MoH and other national level health-related institutions, and provided support to a set of districts with regard to policy, planning and other aspects of health system management, intervention programming and clinical care.

In 2012 the MoH introduced the Regional Performance Monitoring Teams (RPMTs) for the purpose of leading improvements in: data management and monitoring; supervision and mentoring; and coordination of health system stakeholders at the regional level. Twelve teams of eight Focal Persons (FPs) were put in place, each covering HIV/AIDs, Malaria, Reproductive Health, TB, Finance, Information Technology (IT), Monitoring and Evaluation (M&E) and Pharmacy.

Some of the MoH programmes have been implementing approaches simultaneously, to provide focused technical support to the LGs and health facilities. Examples include: The RH Programme implemented RH Zonal Offices; the NTLP implemented TB/Leprosy Zonal Offices; UNEPI together with the Integrated Disease Surveillance and Response (IDSR) Division implemented the EPI/IDSR Regional Offices; the Pharmacy Division implemented the Pharmacy Regional Officers; and the Department of Clinical Services implemented the Specialist (Clinical) Consultants Outreach Programme. The modalities of operation of these programmes varied, in terms of focus of support (combinations of clinical&/or policy &/or programmatic&/or system support), the magnitude of the support, the institutional framework including source of financial resources. For example, some of these programmes have used zonal/regional support units based at RRHs (EPI/IDSR, Pharmacists); other zonal units have been stand-alone (TB Zonal Officers); and some of the support programmes

based directly at the MoH. Some of these programmes still exist and some have ceased.

A number of DPs, operating directly or through IPs, provide support to LGs and health facilities in various forms and models. The United States Agency for International Development (USAID) for example has provided financial support to a number of programmes intended to improve quality of care within the LGs and at the health facility. These include the Delivery of Improved Services for Health (DISH) the Uganda Program for Human and Holistic Development (UPHOLD) and more recently the Regional Health Integration to Enhance Services (RHITES) programmes. The RHITES South- Western Uganda programme for example provides support to a number of districts and health facilities for improving the quality of care. The RHITES-South West programme uses a team of 4-5 officials with a mix of clinical, data-management and social work skills to support 2-3 districts. In addition, some of the IPs facilitate a number of health facilities to provide a range of disease-control support activities. Such activities are often organised around a secondary/tertiary level health facility referred to as a hub mainly for HIV/AIDS control and specifically laboratory services.

The different entities have used various tools to support LGs and health facilities in a bid to improve the quality of health services available to the population. The MoH published the National Supervision Guidelines in 2000, which some of the stakeholders have used, including the QATs and LGs in providing support to LGs/LLGs and health facilities. The Yellow Star Programme (YSP) implemented in the country in the early 2000s for supporting supervision at the health facility level. The YSP consists of 35 quality of care standards measured from the client and the health worker perspectives. More recently, the MoH published the Health Sector Quality Improvement Framework and Strategic Plans (HSQIF &SP) of 2010 and 2015 and accompanying manuals and tools. The HSQIF and SP provide a framework for quality improvement interventions by a number of partners.

The Health Management Information System (HMIS) is the main source of data for the Uganda health system. Data from the HMIS is analysed and presented at the various levels of the health system to support decision-making. Some of the specific approaches to the use of HMIS data to support decision-making have been through comparison of different entities at the same level. Examples of these include the District league table that compares the performance of districts; and the Standard Unit of Output that compares performance of health facilities at different levels. Programme specific tools like the Reproductive Maternal Neonatal and Child Health (RMNCH) Scorecard were introduced.

1.3 Rationale for the Assignment

The objective of the Ugandan health system is to provide UHC to the population, an important aspect of which is access to good quality services. To-date there are concerns about the quality of care provided in the public and private sub-sectors of the Ugandan health system. For the achievement of UHC, it is imperative to have a health system that is structured/organised in such a way as to maximise health outputs and outcomes through minimising inefficiencies, duplication and inequity.

As noted in the previous section, a number of approaches and models have been utilised by Uganda health system stakeholders in the past to provide support to LGs and health facilities for improving coverage of the population with quality health services. There is interest among key health system stakeholders to change the poor quality of health care in the country. In order to make appropriate plans for improvement it is important to have a good understanding of where the sector is regarding the support to LGs and health facilities, and how to address persistent challenges and leverage facilitating factors. It is also important to determine the expectations of the different health system stakeholders.

The USG and its agencies are key stakeholders in the Uganda health system, given the level of financial and technical investment they provide generally and specifically for quality of care initiatives. The USG is supporting a process to review current (and past) efforts by the different players in the Ugandan health system to support LGs and health facilities to provide good quality health care. The findings of this review will facilitate a process of structured stakeholder engagement for the purpose of updating/developing new models for support to LGs and health facilities for improvements in quality of care.

2 Definitions

The key concepts for which working definitions provided include Hub and Spoke, Supervision, Mentoring, Monitoring and Evaluation, Coordination and Organisation Management.

The 'Hub and Spoke' model is based on the concept of a wheel that has a hub (the centre) with multiple spokes all connecting to it. The hub and spoke concept originated from the transport industry, especially the air carriers where it was used to maximise benefits from available resources in a highly competitive industry. The model has been adopted in retailing, education and healthcare. As a model for healthcare organisation, the hub and spoke refers to a network, whereby the anchor site (hub) offers a full range of services complemented by secondary sites (spokes) that offer limited services. Patients that require intensive services are referred to the hub for management². Hub and Spoke usually refers to how a number of health facilities (service delivery points) are positioned in relation to one another. **Figure 2** provides a pictorial presentation of a hub and spoke.

The Hub and Spoke model often found in relation to a 'command and control' organisation structure whereby all the service providers share a proprietor, or operate under a similar arrangement, such that decisions made at the hub are enforced across the spokes. Some aspects of organisation of health services delivery in Uganda resonate with a hub and spoke model. Referral units like RRHs act as a hub for the GHs, with each subsequent level acting as a hub for the lower levels. This is referred to as the hub and spoke dandelion model.

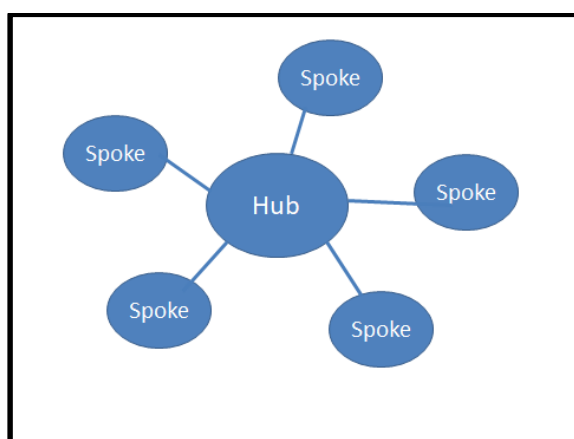


Figure 2: Pictorial Presentation of the Hub and Spoke concept

However, given decentralisation and the devolution model implemented in Uganda, the responsibilities for governance and management are on a different track. The

²Elrod JK, Jr JLF. The hub-and-spoke organization design: an avenue for serving patients well. 2017;17(Suppl 1).

management of the HC Is up to GHs is the responsibility of the districts, whereas the RRHs and NRHs have a level of managerial autonomy (semi-autonomous) and are supervised by the MoH. The MoH has the responsibility for overall sector stewardship and therefore oversight over the districts, RRHs and NRHs. This in essence refers to two overlapping hub and spoke arrangements. In Figure 3 overlapping hubs and spokes of District A (brown) and its management spokes and a RRH with its referral network (blue) are presented.

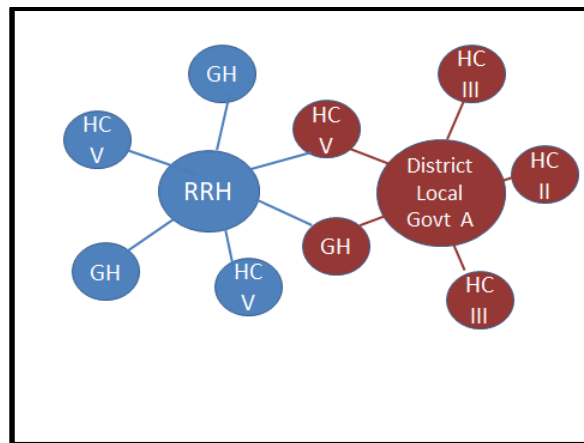


Figure 3: Overlapping Governance and Service Delivery Hubs and Spokes in the Ugandan health system

The HSD strategy was an attempt to bring together these hubs, below the district level. The marked increase in the number of districts affects the effectiveness of the HSD strategy. It is notable that other national level public institutions like National Medical Stores and the Health Service Commission also have strong influence on the management of resources in LGs and health facilities.

Supervision literally means to oversee. Traditionally supervision was envisaged as someone higher up watching to see that a supervisee someone is performing ones job properly. Emphasis in this context tended to focus on inspection and fault finding. Subsequently, the concept of *Supportive Supervision* is defined as “a process that promotes quality at all levels of the health system by strengthening relationships within the system focusing on the identification and resolution of problems and helping to optimise the allocation of resources”³. This paradigm shift was necessitated by the realisation that the supervisees (most often health workers) are professionals expected to have inherent interest to facilitate the provision of good quality health services, with some support from the supervisors. A more specific but not necessarily divergent definition refers to supervision as “an institutional intervention intended to support health worker’s capacity and motivation to perform. Supervision provides a

³ Clements J, Streefland PH, Malau C 2007: Supervision in Primary Health Care – Can it be carried out effectively in Developing Countries? Current Drug Safety, 2007, 2. 19-23

link between service delivery in peripheral units with central management structures (e.g. district, region, national). Supervision provides measures to ensure health workers carry out their role effectively and enable them to improve their competencies”⁴. **Mentoring** on the other hand has been defined as a process in which an experienced individual helps another person to develop his or her goals and skills through a series of time-limited, confidential, one-on-one conversations and other learning activities⁵. Mentoring as defined is a specific aspect of supervision especially when viewed in the context of supportive supervision.

Another related set of concepts is **Monitoring and Evaluation**. Monitoring is defined as the collection of routine data that measures progress toward achieving programme objectives. The purpose of monitoring is to support stakeholders to make informed decisions regarding the effectiveness of programmes and the efficient use of resources. Evaluation on the other hand is the measurement of how well programme activities have met expected objectives and/or extent to which changes in outcomes that can be attributed to the programme or intervention⁶. Thus, monitoring and evaluation are mechanisms to support an institution’s capacity to learn from previous experiences. **Coordination** is defined as the synchronisation and integration of activities, responsibilities and command and control structures to ensure that the resources of an organisation are used most efficiently in pursuit of the specified objectives⁷.

Supervision, mentoring, monitoring, evaluation and coordination are closely related functions of management, which reinforce one another to support the performance of a health system and play a key role in facilitating quality of health services. In some documents in the Uganda health system (e.g. the Area Team Strategy Concept Note, and the Concept Note for this assignment) these related concepts are referred to simply as Supervision Monitoring and Mentoring (SMM). In a context where different stakeholders and structures’ mandates relate and overlap for the ultimate purpose of providing good quality services to the population, certain management approaches are needed. In this regard, the management functions are applied across the WHO health system building blocks, whereby this interaction can be reconfigured (given the mandates by the different players) into the dimensions of policy engagement, health systems management, technical programming and support for clinical care as shown in **Figure 4**.

⁴Hernández AR, Hurtig A, Dahlblom K, Sebastián MS. More than a checklist: a realist evaluation of supervision of mid-level health workers in rural Guatemala. 2014;

⁵Center for Health Leadership and Practice 2003; Mentoring Guide- A Guide for Mentors. Oakland California 2003

⁶ Frankel N and Gage A 2007: M& E Fundamentals – A self-guided mini course. Measure Evaluation 2007.

⁷<http://www.businessdictionary.com/definition/coordination.html>

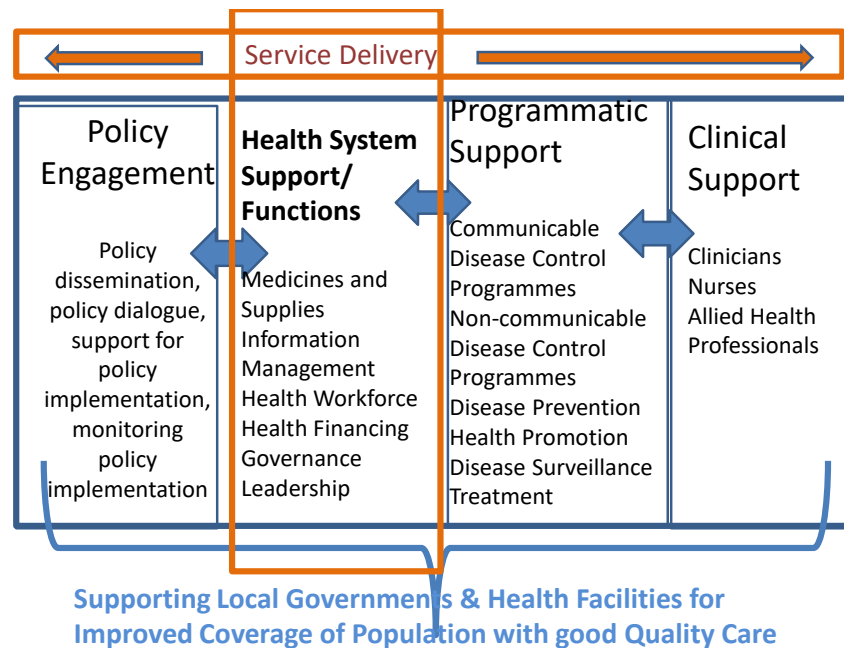


Figure 4: Dimensions of Supervision, Monitoring and Mentoring and the relationship with health system building blocks

Policy engagement refers to the activities that take place around policy (and legislative) issues including policy formulation, dissemination, implementation and monitoring. Health systems management refers to the range of actions that are required to have an appropriately functioning system for the provision of quality services to the population encompassing: medicines and commodities management; information management; health workforce; health financing; and governance and leadership. Technical programming focuses on provisions for specific technical programmes, including for the control of communicable and non-communicable diseases and other health programmes, and covers treatment of disease, prevention, and surveillance. Support for clinical care refers to support provided to improve clinical care by the health worker. This configuration takes into consideration the varying mandates and expertise of stakeholders.

All the activities across the continuum indicated are to support service delivery as depicted in **Figure 4** where service delivery is represented as intersecting the different dimensions. Support from higher levels of management and service delivery to the LGs and health facilities is required across all four dimensions. In section 1 of this report, a number of approaches that used by Uganda health system stakeholders over the last 2 decades to support improvements in quality of care at the LG and health facilities were referred to. Examples used vary in terms of focus/emphasis across the dimensions of policy engagement, health systems support, technical programming and clinical care.

In the course of implementation of this review, and discussions between the Consultant and Client, it was necessary to introduce another phrase. This was in response to the perceived specificity of the term Hub and Spoke on one hand, and the ambiguity of SMM system on the other. The phrase **Organisation Management** (OM refers to the functions of supervision, mentoring, monitoring, evaluation and coordination, while explicitly relating them to the complexity of the health system context including the governance structures and multiplicity of stakeholders. Improving quality of health services accessed by the Ugandan population linked to the provision for public management and the various stakeholders. The term Organisation Management (OM) refers to the explicit positioning of management in service delivery. An organisation management (OM) model is a specific approach in which the management functions are carried out in a given system with the service delivery and management mandates.

Organisational management (OM) refers to functions of supervision, mentoring, monitoring, evaluation and coordination while explicitly relating them to the health system context in which they are applied.

Inspection is defined as “...the external verification of goods and services produced in a given sector with respect to standards, rules and regulations”. As this definition indicates, inspection is most often external. In the Ugandan context, inspection is provided for in the various legal provisions and statutes. Acts of Parliament established the Professional Councils that regulate the various professional cadres namely: medical and dental officers, nurses and midwives, pharmacists and allied health professionals; as well as regulatory authorities such as the National Drug Authority. These Councils and Authorities provide the bulk of inspection and regulatory services in the Ugandan health system. Inspection is complementary to other OM efforts for the holistic achievement of improvements in the quality of health services.

3 Methodology and Approach to Assignment

3.1 Study Design

The Consultant used a health systems research approach for the assignment given the complexity of the subject. The initial consideration of the methodology to be utilised for this task took a broad view, beyond the SoW for this particular assignment, considering the purpose and the whole range of objectives under **Section 2.2**. However, a phased approach, involving mixed methods of data collection and analysis was agreed on as necessary to deliver the entire task effectively.

The *first phase* covers the review of past and current OM models. The expected product from this phase is a review of past and present models and early proposals for updated models. The second and third phases are to cover the 4th objective of the broader task. The *second phase* would be expected to focus on detailed development of new models/updating existing OM models for Uganda, building on the output of the first phase. The expected output of this phase is a short list of OM models including detailed information on resources and other implications. The *third phase* is for further consideration of the new/updated OM models, utilising the views of a wide range of health system stakeholders on the individual models' appropriateness and feasibility. The expected output of this consultation is consensus on 1 or 2 OM models for implementation in Uganda's health system.

The study design is summarised and illustrated in **Figure 5** below. Given the nature of the assignment and the health system research approach it was envisaged that there could be need for adjustments in methodology during the course of implementation of the broader task, in line with overall assignment purpose and objectives.

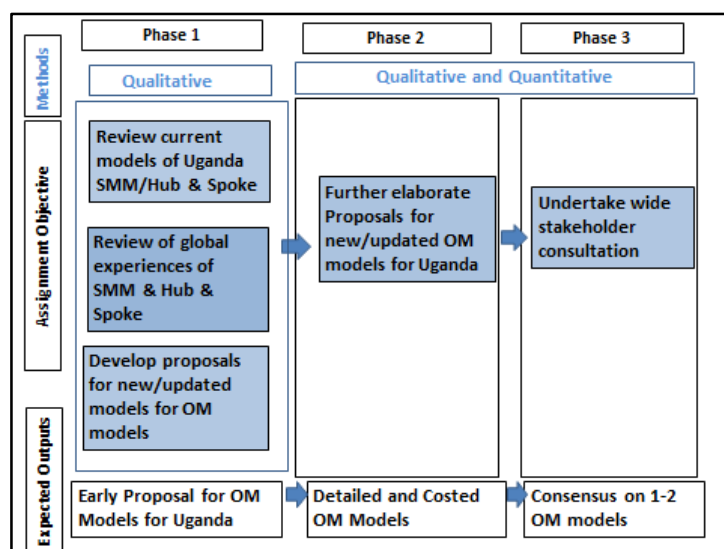


Figure 5: Hub and Spoke Review Study Design

This report focuses on the first phase of the assignment responding to the first three objectives (review of Ugandan and global OM models, including identifying challenges and facilitating factors) and initial effort on the fourth objective (propose new models for OM). **Table 1** below provides a summary of how the different methodological approaches were used to respond to the objectives of the assignment and provide the expected output. More detail is provided in the subsequent sections.

Table 1: Phase 1 Review Questions, Methods and Expected Outputs

Objective/Review Question	Methodology	Expected Output
Review of Ugandan OM models Review global OM models with emphasis on LMICs Identify factors that influence effectiveness of current models;	Literature & Document Review In-depth Interviews	A review of current Ugandan and global OM models;
Draft new models for OM for the Ugandan health system	Synthesis of findings and consideration of Ugandan context	Early proposals of new/updated OM models for Uganda

3.2 Data Collection

The review involved document review and data collection in-depth interviews. The documents and literature reviewed included those relating to broad aspects of the Uganda health system as well as those specific to supervision mentoring monitoring evaluation and coordination from Uganda and beyond. A total of eleven (11) OM models were purposively selected for detailed study. In choosing which OM models to study the Consultant considered the ToRs and the feasibility of getting information within the given time and financial resources. Models were selected across a number of categories as required by the assignment objectives, as shown below:

- The Uganda MoH managed system-wide models: the Area Teams; Regional Performance Monitoring Teams;
- The Uganda MoH managed programme specific models: Regional Pharmacists and TB/Leprosy Zonal Officers;
- Uganda health system models implemented by other stakeholders: RHITES-South West district based team;
- Uganda non-health sector models as implemented by the Uganda Police Force and the Inspectorate of Government;
- A number of models implemented beyond Uganda, namely:
 - Models from Ghana and Tanzania which were studied as examples from countries that share a number of similarities with Uganda (decentralised, LMICs in sub-Saharan Africa);
 - Specific Hub and Spoke models reported from USA and India.

A list of the key documents used for this assignment is provided in **Annex 2**.

Following the document and literature review, the Consultant conducted some in-depth interviews to fill in gaps in information on some of the models. Key informants selected were individuals who had extensive knowledge/information on one or more of the models. A total of fifteen (**15**) **KIIs** were conducted. Annex 3 provides a list of the Key Informants and their affiliation. Annex 4 provides a structured tool used for data collection the KIIs.

Around the inception stage and at the point of sharing early findings of the review the Consultant held discussions with SITES and USAID officials who provided input into the study. As an example, a more in-depth review of the governance, roles and responsibilities of the Regional Referral Hospitals was added a result of these discussions.

3.3 Data Analysis and Synthesis

The Consultant used the data collected from the literature and document review as well as the KIIs to develop highlights of the selected OM models. In line with objectives A-C of the assignment, data analysis was done to identify common themes and peculiarities and to highlight facilitating and inhibiting factors of the different models. The information thus derived was utilised for lesson learning; and to support the development of an initial set of proposals for new/updated OM models for the Uganda health system.

4 Findings of the Review

This chapter presents the findings of the review in three parts. **Section 4.1** has the detailed information on each of the 11 OM models reviewed. **Section 4.2** provides highlights of governance arrangements, functionality and the current role of Regional Referral Hospitals (RRHs) in providing support to LGs and health facilities in Uganda. **Section 4.3** provides the analysis of the factors identified as enabling or hindering the performance of the different OM models. **Section 4.4** documents some of the limitations of this study. The findings and analysis from this chapter forms the basis for the development of new/adjusted OM models presented in **Section 5**.

4.1 Highlights of Organisation Management models in the Uganda health system and beyond

The review focused on OM models that have been implemented by the Uganda MoH and related entities in the public health system; other Uganda health system stakeholders; other sectors in Uganda and in other countries. This section provides highlights of each model including the objectives, the resources, activities, achievements and challenges. Certain aspects of the OM models such as the policy and legal framework; cascade of support at the different levels; lines of accountability; communication channels; records management and other dimensions. In addition, reference is often made to the context in which the model was implemented.

4.1.1 Organisation Management models implemented by the Ministry of Health and related public health system entities

OM models implemented by the MoH and related public health entities in Uganda include system-wide and programme-specific models. The system wide models reported on here include the Area Teams and the RPMTs; the programme-specific models include the Regional Pharmacists Programme and the TB/Leprosy Zonal Programme.

Area Teams

MOH introduced the “Area Team” strategy in 2004. A number of health system reforms introduced into the Uganda health system in the late 90s and early 2000s, include decentralisation, sector wide approach to health development (SWAp) and Public Private Partnership in Health (PPPH). In **Section 1** the roles and responsibilities of the various levels of the health system under decentralisation were highlighted. Under SWAp, the government (led by MoH) sought to work together with other health system stakeholders especially the Development Partners (DPs) to support comprehensive health system capacity development. Under PPPH, MOH put in efforts to work more closely with the private health services providers especially the

facility based PNFP providers. The Area Team approach was documented in a strategy paper by the MoH Health Planning Department. The objective of the Area Teams was indicated as to provide comprehensive support to the LGs and health facilities in order to build their capacity sustainably for effective and efficient delivery of the Uganda National Minimum Health Care Package (UNMHCP).

The country was divided into ten Area Teams (initially), each covering 3-7 districts. Each team was composed of officials from different MoH departments/programmes, and were responsible for providing continuous support to the designated districts covering the whole range of clinical, programmatic, health systems management and policy engagement dimensions. Senior officials of the MoH held key positions on the Area Teams: The chairpersons were at the level of Commissioners or Assistant Commissioners and the secretaries were Assistant Commissioners or Principal Officers. In addition, each team had a member of the top management of the MoH as a supervisor. Responsibility for managing the Area Team Secretariat was initially with the Planning Department and later transitioned to the Quality Assurance Department of the MoH. The teams benefitted from Danish International Development Assistance (DANIDA) support through the Health Sector Programme Support that provided financial and logistical support. The bulk of the routine operations of the Area Teams were facilitated by funds from the MoH budget for planning, supervision and monitoring.

The specific responsibilities of the Area Teams include

- To facilitate the districts in the defined area in respect of planning, budgeting, delivery of the UNMHCP and monitoring performance against stipulated targets;
- To provide continuous assessment of district and health sub district needs and ensure equity within and across districts;
- To provide supportive supervision and mentoring for the various cadres of health workers;
- To provide information updates regarding the relevant district health sector performance levels;
- To ensure a results-oriented approach in following up actions to be taken to address identified bottlenecks.

The main mode of operation of the teams is through quarterly visits to each of the districts, with site visits at a sample of management and service delivery points. Based on a situational analysis and on a rotational basis, the focus for the quarterly visits was agreed on at the MoH. This typically focussed on 1-2 technical/management programmes. The necessary preparations including developing guidelines and checklists; and orienting the teams is done. Members of the District Health Team participate with the teams on field visits that focus on problem identification and solving as well as collecting data on salient issues.

LG and health facility performance is analysed in relation to agreed targets, available resources and previous performance as reported in the HMIS, LG and national sectoral reports. The District League Table is one of the tools utilised to assess LG performance. The Area Team supervision is expected to work in tandem with internal supervision taking place within the district, HSDs and health facilities as provided for by the National Supervision Guidelines. Teams conduct debriefing meetings with LG and health facility managers on completion of the field activities in addition to individual district reports shared with supervisees. Visiting teams sign the supervision books in addition to leaving a record of findings and expected actions at the different sites. Reports from all the Area Teams are summarised and aggregated into a national report that is discussed at the MoH Senior Management Committee and the Health Policy Advisory Committee (HPAC) meetings. One-two page briefs are submitted to the MoH Top Management. The Area Team reports are also utilised during the annual planning processes and individual technical programme supervision. The Area Teams facilitate regional and district planning meetings whereby national policies and guidelines, available resources, district priorities and the need to respond to identified challenges are utilised to develop district, health facility and facility work-plans.

The Area Teams have been providing integrated support for health system development across the country for the last 14 years. Area Teams are recognised for facilitating MoH Management's appreciation of issues affecting health services delivery at health facility and LG levels. The Area Teams encourage and support the LGs and health facilities to improve where they are not doing well. There is evidence to show that the MoH is responsive, making adjustments in policies and policy guidelines, resources allocation and provision of tailored support.

Members of MoH Top Management make follow-on visits in LGs with persistent challenges. In a study carried out to review supervision mechanisms in 2008, more than 75% of the respondents at the LG and health facility levels rated Area Teams supervision as fair to very good. However, in the more recent past, a number of questions regarding the functionality of the teams have been raised. The Area Teams are reportedly less active today and under appreciated by the different stakeholders at the national, LG and health facility levels. A study in 2014 revealed that 72% of central level respondents gave the Area Teams a poor rating.

Some of the challenges that noted with regard to the Area Teams include:

- a) Few and poorly planned field visits due to limited/inadequate and irregular financial and logistical resources, in the context of the increased number of LGs. In the last couple of years, the teams have only visited the LGs once or twice in a year.

- b) Limited availability of senior staff for Area Team activities. In the most recent past, only two or three officials have participated in the field visits. Mainly due to competing priorities at the MoH and limited appreciation of the strategy.
- c) Under-utilisation of supervision findings and reports for decision-making, with limited feedback and follow-up on team findings is noted at all levels of the health system. Area Teams appear unable to facilitate the development and/or implementation of solutions to identified problems. This has been associated with discouragement and lack of interest among the supervisors and those they supervise.
- d) The approach by the Area Teams has been to put more emphasis with their support on the dimensions of policy engagement and health systems management, compared to technical programming and clinical care; and to lean more towards monitoring rather than supportive supervision.
- e) The Area Teams were expected to work in tandem with internal supervision within the LGs and the health facilities. A number of reports indicate that currently internal supervision is limited and fragmented, which is related to poor prioritisation and inadequate resources for this function within the LG health systems.

Regional Performance Monitoring Teams

MOH established Regional Performance Monitoring Teams (RPMTs) in 2012. The main objective of the RPMTs was “strengthening capacity for active performance monitoring and surveillance of programme outputs in order to support the performance of implementing agencies at all levels”. The roles and responsibilities of the RPMTs is based on eight technical and health systems programme areas: HIV/AIDS, malaria, reproductive health, tuberculosis, pharmacy, finance, information technology (IT) and monitoring and evaluation. Twelve teams delineated along regions, each covering between six to fourteen districts, were established. Each team was composed of eight Focal Persons (FPs) corresponding to one of the technical/health system programmes. The RPMTs program was designed to be a regional extension of the MoH. A number of documents including a Concept Note, the Global Fund Round 10 Health Systems Strengthening (HSS) Proposal and Operational Guidelines for the RPMTs provide information on the objectives, composition and responsibilities of these entities.

The RPMTs offices were located in municipalities across the country. It is notable that there are Regional Referral Hospitals (RRHs) also based in these municipalities. However, with the exception of 2, the RPMTs were not based at the RRHs. Global Fund Round 10 HSS Grant with additional support from other Global Fund grants facilitating RPMT operations. MOH channelled funds for operations of the RPMTs to the host districts (the district in which the RPMT office was located). Quality

Assurance Department of the MoH provided the oversight of the RPMTs. Subsequently this function shifted to the Global Fund Focal Coordination Office (FCO) for most of the time the teams were operational. By 2017, the management of the RPMTs transitioned to the Health Planning Department. The FPs were individuals with basic training in biological or social sciences and post graduate training in public health or programme planning and monitoring with the exception of the FPs for Pharmacy, IT and Accounts who were required to have an undergraduate degree in the relevant area.

The RPMTs were involved in a number of activities including: Organising and facilitating performance reviews; supporting data cleaning and analysis; carrying out support supervision within LGs and health facilities; carrying out data quality assessments; and supporting LGs in carrying out data management related action research. The multidisciplinary teams (all FPs) participated in integrated support visits to the districts and selected health facilities, planned for every quarter. The approaches used by the RPMTs included: Problem identification, on job training, on site feedback and debriefs and health policy guidance. The RPMTs were involved in data quality assessments and data cleaning for the District Health Information System version 2 (DHIS2), in line with each FP's area of work. Findings from the visits and data assessments formed the basis for discussions at district and regional performance review meetings and fed into quality improvement plans at the different levels of the health system. RPMTs submitted activity reports to the MoH and these reports used for decision-making at that level too.

An evaluation carried out in 2017 noted that the RPMTs contributed to improvements in data management and quality and to a limited extent to improved data use. The district and regional performance review meetings organised by the RPMTs reportedly contributed to increased involvement by the LG political and administrative leaders in health system management and peer learning. However, the effect on health worker skills in management of patients noted to be almost non-existent. Overall, the RPMT program had minimal contribution to improvements in the health system's capacity to provide high quality interventions to the population. In June 2017, RPMT implementation was halted. The RPMTs were in place for a short period, with actual operations only taking place over the period 2014-16. As such, by the time the RPMTs program closed, some of the districts and health facilities were just beginning to appreciate their purpose. The initial agreement with the Global Fund was that by the end of the Round 10 HSS Grant period, Government would support the RPMTs. However, by July 2017, there was no government budgetary provision for the RPMTs and the operations ceased.

A number of challenges noted with the design and implementation of the RPMTs.

- a) There have been multiple documents stating the purpose of setting up of the RPMTs. Some documents emphasised a comprehensive role, covering all technical programmes and the different dimensions of supervision mentoring monitoring evaluation and coordination. On the other hand, some of the literature reviewed documented a limited focus on a few disease control and health system support programmes with emphasis on data management and monitoring. This discordance illustrated in the budgets, activities and subsequently the outputs of the RPMTs. There was minimal effort to provide technical/clinical support to the health workers and much more on data management.
- b) There was lack of clarity/consistency with regard to the management arrangement for the RPMTs. The shift of the supervisory role from the Quality Assurance Department to the Global Fund FCO was associated with de-linkage of the RPMTs from mainstream MoH, which led to decreased involvement and ownership and poor supervision and accountability. This also led to confusion among stakeholders as to whether the RPMTs represented MoH or Global Fund at the regional level.
- c) The activities carried out by the teams were fewer than planned; irregular; and often inappropriately timed. This was largely attributed to inadequate and irregularly disbursed funding. Funds were provided for one integrated visit per quarter only, with limited possibility for follow up visits by individual FPs in cases where specific need was identified. The disbursement of funds through host districts led to marked delays given poor adaptation to LG systems for financial management. Logistics too were inadequate. Provision for transport for a team of 8 FPs was one 2-wheel drive van.
- d) The position of the RPMTs at the regional level was ambiguous, without clearly indicated relationships with other regional entities including the RRHs, IPs operating in the regions and other regionally operating arrangements like the Area Teams and Programme Zonal Officers⁸. Any working relationships that were developed were based on individual manager's capacity and pro-activeness. The RPMTs were said to have been poorly inducted and their roles and responsibilities not clearly communicated at the regional and district health system levels.
- e) The capacity of many of the FPs was reportedly lacking especially in technical (clinical) competencies and in experience with government systems. This had implications for the type of support they could offer and the level of respect/confidence they inspired amongst LG managers and health workers. The limited capacity of many of the FPs was attributed to the employment terms, whereby the salaries offered were deemed to be too low in the context of one year contracts, to attract competent and skilled individuals.

⁸With the exception of TB/Leprosy Zonal Officers who were subsumed under the RPMTs

Regional Pharmacists Programme

MoH introduced the Regional Pharmacist Programme in 2005, in response to the Health Sector Strategic Plan 2005/06 to 2009/10 (HSSPII). The Regional Pharmacists (RPs) provided support to LGs and health facilities in terms of medicines and health supplies management. This was in the context of decentralisation and the recognised need for more skills for medicines management within the LGs and health facilities. It was also in recognition of the limited capacity (numbers and logistics) at the MoH Pharmaceutical Programme to traverse the whole country.

The RP is a pharmacist employed by the RRH in the designated catchment area. The funding for the activities of the RPs beyond the RRHs is provided mainly by DPs. The DANIDA funded Health Sector Support Programme provided funds at the initiation of the programme and subsequently the programme benefitted from the USAID funded programmes Securing Ugandans' Rights to Essential Medicines (SURE) and Uganda Health Supply Chain Management (UHSCM). The Pharmaceutical Division of the MoH supervised and coordinated the RPs activities beyond the RRH.

The RPs carry out support supervision visits to the LGs and health facilities, during which they identify medicines management challenges and support LGs to come up with solutions, in consultation with the MoH if necessary. The Regional Pharmacist works with the district medicines management focal persons. Initially this portfolio was filled by the District Drug Assistant Inspector (DADI) and currently by Medicines Management Supervisors (MMS) who are health workers that have received some training in medicines management and are facilitated by IPs. The Regional Pharmacists working with the MMS utilise the **Supervision Performance Assessment Reward and Strategy (SPARS)** tool developed by the MoH Pharmaceutical Division. The SPARS tool covers five dimensions of medicines management namely: Dispensing, prescribing, stock management, store management; and ordering and reporting. The data picked using SPARS is uploaded on the Pharmaceutical Information Portal (PIP) and is used by medicines management stakeholders to support decision-making.

The RPs, although initially very active have been noted to be less active in the more recent past. This has been attributed to a number of challenges including the following:

- a) The RPs are employees of the RRHs, with core medicines management responsibilities within the hospitals. Sometimes the Supervisors and/or the Pharmacist do not prioritise the activities beyond the RRHs. The catchment area for each RRH is big; covering an average of about 10 districts each. One visit to each district every quarter translates into a lot of time away from the RRH for the RP.

- b) IPs provided funding for the RPs activities beyond the RRH. The funds are often inadequate, not timely and not provided for the most appropriate activity given the RPs objectives.
- c) There is limited/inadequate medicines management capacity and few designated officers at the LG and health facility levels. The DADI was phased out; the National Pharmaceutical Plan indicates the need for a District Pharmacist. However, currently this is not an approved position. The MMS are an ad-hoc arrangement and the individuals are not always available for medicines management activities.

Tuberculosis and Leprosy Zonal Program

The National TB and Leprosy Programme (NTLP) has been providing leadership to the sector for the implementation of a framework to support management and delivery of services for Tuberculosis (TB) and Leprosy control since the 1990s. The NTLP functions in conjunction with the TB/Leprosy Zonal offices, district TB focal officers, health facility TB focal persons and community level resource persons. These structures have been useful for planning and implementing activities at all levels, including the community level. The country was divided into 9 regions and a TB/Leprosy (TL) Zonal officer appointed to each one. The TL Zonal officers are usually medical officers with postgraduate public health training. The TL Zonal Officers are located in municipalities across the country. Over the period 2012-2017, TL Zonal Officers were doubling as RPMT TB Focal persons. MoH and DPs, particularly the German Leprosy Relief Agency (GLRA) and the World Health Organisation (WHO) support the TL Zonal offices. The DP support provided for office premises, vehicle maintenance and funding for a number of routine activities.

The TL Zonal officers are responsible for providing support over the range of supervision mentoring monitoring evaluation and coordination dimensions namely: Policy engagement, systems and programme management and clinical care. In conjunction with the NTLP, the TL Zonal office contributes to a number of activities including disseminating policy documents, supporting the management of TB/Leprosy commodities, training of health workers and managers in various aspects of TB/Leprosy control, participating in specific activities like frontline investigations, providing clinical support to health facilities and management of TB/Leprosy related data. In the recent past, the TL Zonal offices were instrumental in translating TB into the DHIS2 and supporting its operation. Similarly, the TL Zonal Offices handled the integration of TB/Leprosy commodities into the mainstream system supported by MoH and the National Medical Stores. TL Zonal Officers organise quarterly TB/Leprosy performance review meetings with the relevant district managers and focal TB officers. The health facilities supported by the TL Zonal Officer include the RRHs.

The TL Zonal Officers and District TB focal persons have been the backbone of the TB/Leprosy programme in the country, whereby the lean office at the NTLP plays a coordination and policy oversight role. The TB/Leprosy programme in the country is recognised as a successful one given the many achievements. The TL Zonal Offices have been a key factor in this success. However, the TL Zonal programme has experienced/is experiencing a number of challenges that include:

- a) The NTLP is having funding challenges; some of the DP programmes that have been supporting them have wound up or are winding up.
- b) The NTLP recognises nine (9) zones, but only six (6) had substantively appointed officers at the time of this study. Additionally the zones as per current demarcation are big, with an average of 12 or more districts per zone. Consequently, zonal officers have reported heavy workloads often translating into high turnover, in these positions.
- c) The provision of support along the whole continuum ranging from policy engagement, systems and programme management and clinical care is challenging. TL Zonal Officers have challenges meeting these multiple requirements in terms of competencies and time. A tendency to focus on the management and programming aspects at the expense of support for clinical care has been reported.
- d) There are challenges with regard to coordination between the national and the regional/zonal level; and at the regional level between the TB/Leprosy programme and other regional activities for programmes like HIV/AIDS control and related activities at the RRHs.

4.1.2 Organisation Management models implemented by other health system stakeholders

Uganda health system stakeholders, beyond the MoH and its immediate affiliates, have implemented a number of OM models in order to improve on the quality of health services. A brief summary is provided here of the model currently operated by the Regional Health Integration to Enhance Services (RHITES) South West.

Regional Health Integration to Enhance Services (RHITES) South West

The RHITES South West is a USAID supported project covering fourteen districts of south-western Uganda whose implementation started in 2015. RHITES SW implemented by EGPAF, in collaboration with Amref Health Africa, Uganda Health Marketing Group (UHMG) and Mayanja Memorial Hospital. RHITES South West is purposed with increasing the availability, accessibility and quality of health services

including those related to HIV and TB prevention, care and treatment; maternal, neonatal and child health; family planning; nutrition counselling; malaria treatment; and other primary care services.

A key focus of RHITES South West is to build the capacity of LGs, health facilities and communities to provide good quality health services. RHITES South West utilises District Based Teams (DBTs) as the cornerstone of the capacity building effort. Each DBT is responsible for 2-3 districts and is composed of 4-6 members of staff including clinicians, social workers and data management officers. The officials filling these positions are a combination of diploma and first-degree holders. The members of the DBT spend up to 80% of their time in district support activities. The approach used by the DBTs to support the LGs, health facilities and communities, is through field visits, engagement of health system managers, continuing professional development sessions and monthly data review meetings. While supporting the function of the overall health system in the region, the DBT focuses on the priority areas for RHITES SW mentioned above. RHITES South West senior technical officers support DBTs in the dimensions of disease control /clinical care and system management based at the main offices in Mbarara Municipality. The senior technical officers are individuals with post-graduate qualifications in biomedical sciences/public health and substantial (at least 5 years) experience in the Uganda health system. RHITES South West maintains a fleet of vehicles and motor cycles that are available to the DBTs and other staff for field engagements.

The RHITES South West programme has a presence in the LGs and health facilities it supports through the DBTs and the senior technical officers. Health managers and frontline health workers have reported this information. Similar information is noted in the visitors and supervision Books. The programme has been credited with contributing to improvements in quality of services; increased services uptake; improved response to community expectations; and use of data for decision-making. These achievements are largely attributed to the levels of facilitation in terms of finances, logistics and human resources. The challenges that the programme faces include:

- a) Limited and inadequate funds for health systems management and services delivery within the LGs and the health facilities;
- b) Low motivation among LG managers and health workers to undertake activities in line with their responsibilities;
- c) Very limited activities in terms of the routine support supervision expected to take place throughout the public health system from the MoH to the LGs through to the health facilities and communities;
- d) The limited authority by the DBTs and RHITES South West to make or influence most of the changes required in the face of identified problems, given

the fact that in terms of governance/administration they are not part of the public health system.

4.1.3 Organisation Management models in other Ugandan Sectors

In the context of decentralisation and the increasing number of LGs especially districts, different sectors have sought to implement OM models to enable them effectively implement their mandates throughout the country. In this sub-section, we provide brief summaries of models implemented by the Inspectorate of Government and the Uganda Police Force (UPF).

Inspectorate of Government

The Inspectorate of Government was established by the Inspector General of Government Statute of 1988, subsequently provided for by the Constitution of Uganda of 1995 and the Inspector General of Government Act of 2002. These documents provide the institution's mandate, functions, powers and organisational structure. The Inspectorate of Government is an independent institution charged with the responsibility of eliminating corruption, abuse of authority and of public office. The Inspectorate of Government is composed of the Inspector General of Government (IGG) and two Deputy Inspector Generals (DIGs), seven Directorates and 8 regional offices. The Directorate of Regional Offices is in charge of the regional offices and the other Directorates communicate to the regions through this Directorate.

Each of the regional offices covers 8-14 districts and comprises of 5 technical staff including a Principal Inspectorate Officer, who heads the office; a Senior Inspectorate Officer and three Inspectorate Officers. Staff at the regional office include; a secretary, an accounts assistant, an office attendant, a records officer and two drivers. The regional office is facilitated by office premises and two vehicles and funding in form of monthly imprest based on the annual work-plan. The regional office runs a bank account whose signatories are the Principal Inspectorate Officer, the Senior Inspectorate Officer and the Accounts Assistant. The imprest is utilised to run routine office activities and procurement of small items, fuel and minor vehicle repairs.

Upon receipt of a complaint from a member of the public, as per the mandate of the Inspectorate of Government, the regional office seeks authorisation from the national office after which they can go ahead and investigate the matter. On completion of investigation, the regional office submits the report to the national office. The findings of an investigation into a case can only be published by the authority of the IGG or DIGs. Once so authorised, the regional office can disseminate the report. Each regional office manages its own records system. Overall, communication to the public

from the regional office is limited and is only possible after approval by the national level. The regional offices coordinate with other public and private entities with offices at the regional and district levels including the Police, Office of the Auditor General, Judiciary and the Public Procurement and Disposal of Assets Office. The national office undertakes transfers of officers in the regional offices frequently (after every 3 years) to prevent undesirable familiarity with members of the public.

The IG regional office is recognised for decongesting the national level and bringing services closer to the population. The challenges at the regional offices include inadequacy of financial, logistical and human resources.

The Uganda Police Force

The Constitution of 1995 and the Police Act provide the mandate of the Uganda Police Force, which is “...to protect the life, property and rights of an individual; maintain security within Uganda; enforce the laws of the country; ensure public safety and order; prevent and detect crime in society”. The Inspector General of Police (IGP) and the Deputy Inspector General of Police (DIGP) head the Uganda Police Force (UPF) and are supported by Directors and Commanders. The Police Act (Article 7) provides for Regional and District Police Offices, at which level the command of the force is vested into the Regional Police Commander (RPC) and the District Police Commander (DPC) respectively.

Currently, the country is divided into 27 Regional Police Offices (RPOs), each of which is supported by a number of departments including Criminal Investigations, Traffic, General Duties and Community Policing. The RPO is headed by the RPC who should be at the level of an Assistant Commissioner of Police, a graduate of the senior police command course (equivalent to postgraduate training) and with at least 15 years of experience in the force. Under the supervision of the RPO are District Police Offices (Division Police Offices in urban areas) headed by the DPC assisted by various heads of departments. The DPCs are officers that should be at the level of a Senior Superintendent of Police and graduates of the intermediate police command course (equivalent to a first degree). At the sub county level there is expected a police station; and at the parish level a police post, close to the population, to support community policing. The UPF is a highly stratified organisation, with varying levels of decision-making taking place at the different levels. The Police Advisory Committee (PAC), chaired by the IGP/DIGP meets every two weeks and makes key decisions on pertinent issues. The PAC directives are conveyed to the relevant Directorates that transmit them downwards through the chain of command.

Guided by directives from the national level and interpretation of the legal framework and various guidelines, the RPCs and DPCs who provide leadership to

their areas of mandate. The Constitution, Police Act, Police Standing Orders, Standard Operating Procedures and other legal instruments like the Public Order Management Act provide the framework under which the UPF operates. The management of resources and logistics in the UPF is centralised. With the exception of a limited operations budget, the procurement of frequently needed items and services like fuel and major vehicle repairs are managed at the national level. Human resources management is also centralised. The national level directly deploys all gazetted officers across the country including DPCs. The RPCs and DPCs share the management of the officers at the lower levels, but require approval for most of their decisions from the national level. Other human resources management functions like the pensions administration are also carried out at the national level. There are disciplinary courts from the level of the police station upwards to the national level.

The management of cases also follows a tiered structure. Criminal/grave offences are handled at the level of the DPO and higher; while less grave offences including most civil cases can be handled at police stations and police posts. Regarding records management, each post has its records, with summaries of occurrences (Situation Report commonly referred to as Sit-Rep) transmitted upwards from the lower facilities through to the DPO and the RPO and finally the IGP on a daily basis. The DPC compiles data on a monthly, semi-annual and annual basis, which is then transmitted to the national level. The records management system is manual and uploading into a computerised database only takes place at the national level. The UPF cultivates horizontal relationships at the different levels of government; most notable at the district level with the Resident District Commissioner (RDC), Local Council V Chairperson, the District Internal Security Officer (DISO) and the Judiciary. These relationships are only collaborative and complementary not supervisory.

The OM model implemented by the UPF is commended for providing flexibility and discretion, which facilitates the RPOs and DPOs to carry out routine activities. However, the low levels and centralised management of resources and logistics is noted to present major operational challenges and affects the effectiveness of the UPF. The proliferation of LGs is another challenge to the UPF as they are required to extend the necessary services to newly created units without additional funding. There are few counterparts to the RPO as most sectors do not have offices at this level, which has been associated with the tendency to micro-management by the RPCs.

4.1.4 Examples of Organisation Management models in the health system in other countries

Different approaches have been used by different countries and stakeholders across the world to facilitate the provision of good quality health services. Ghana and Tanzania are LMICs in sub-Saharan Africa, practising decentralised governance. Given

a number of similarities with the Ugandan context, OM models were selected from each of these countries. In addition, given particular reference to the Hub and Spoke model of OM in the Concept Note for this assignment, two examples of this modality as practiced in the United States of America (USA) and India are presented here.

Facilitative Supportive Visits in the Upper West Region of Northern Ghana

In 1999 the Government of Ghana adopted the Community-based Health Planning Services (CHPS) programme as a strategy to redress inequalities in access to health services by strengthening community health services. As part of its efforts to expand CHPS, a project funded through Japan International Corporation Agency (JICA) was implemented in Upper West Region (UWR) of Ghana, an area characterised by extreme poverty, inadequate access to PHC and very poor health indicators. Facilitative Supportive Visits (FSVs) as a mechanism of supervision were included as a component of the project given understanding that appropriate PHC service delivery requires effective supervision. Under FSVs, supervisors at all levels of an organisation view the staff they are providing oversight to as their customers and therefore focus on their needs. The supervisors' role is to enable staff to manage quality improvement processes, satisfy clients' needs and implement institutional goals. FSVs emphasise monitoring, joint problem solving and two-way communication between the supervisor and those being supervised. Adoption of FSVs is expected to lead to a shift from inspection and fault finding to assessments and collective problem solving that in turn leads to quality improvements.

The Ghana UWR OM model was organised around the Regional Health Management Teams (RHMTs), which are composed of the Regional Director and officers in the four main units of public health, clinical care, health administration and support services. The RHMT is responsible for strategic planning, resources mobilisation and distribution, training, technical support and monitoring and evaluation of service delivery in the districts. The UWR of Ghana is made up of nine districts, each with a District Health Management Team (DHMT). The DHMT has oversight responsibilities over Sub District Health Teams (SDHT); whereas the SDHTs have oversight over Community Health Officers (CHOs). Community participation in health service delivery was facilitated at all levels through community representation on various health committees at regional, district and sub district levels. With the implementation of the FSVs intervention, a cascade of activities was implemented from the RHMT to the DHMT, the DHMT to the SDHMT and the SDHMT to the CHOs. The activities on a quarterly basis for each level included self- monitoring; data collection and analysis; report writing and submission to the supervisor level; and feedback to the supervisee level. The analysed content of the reports was submitted upwards to the RHMTs through the different management levels, as per clearly agreed schedules.

This approach to providing support to the lower governments and community health services was appreciated for its attitude to collective problem solving, on-site feedback mechanisms, emphasis on written reports, structured reporting arrangements with time lines and discussions of supervision activities at all levels through monthly, quarterly and bi-annual discussions and presentations. Support for the FSVs as a mechanism for supervision in the region was reported, which was further enhanced by good leadership functions at the regional and district levels. But despite the above achievements, FSVs as an approach to supervision experienced a number of challenges including: Lack of political will to scale up in other regions, inadequate resources and varying understanding of FSV concept among health sector leaders. The shift to this facilitative approach of supervision from the long-time practised and known traditional ways was not easy. And the mechanism heavily relied on donor funding for its operation.

Supervision of mid-level health workers in Tanzania

The government of Tanzania has indicated its commitment to reducing maternal mortality by scaling up the provision of emergency obstetric care. The government recognised performance management and productivity gaps as hindrances to realising its objectives and sought to address this by focusing on improved supervisory support and employee relations. In Tanzania, the management of health care services is decentralised. At the regional level, the Council Health Management Teams (CHMTs) are responsible for providing support and evaluation of implementation of health services at the district level. The multidisciplinary CHMT teams provide support supervision through undertaking visits to districts. This report utilised the findings of a study that was carried out to look at the perceptions of CHMT members on supervision practices in their respective districts a few years ago.

Perceptions were structured around five major themes of: Supervision paradigm, the importance of supervision, supervision in practice, assessing performance and challenges in the implementation of supervision. CHMT members emphasised assisting and supporting health workers as the most desirable approach to supervision. They felt that supervision was constructive to improve staff performance and motivation in health facilities. The two-way communication was described as a critical factor and mechanism to create team spirit as workers are able to express their opinion and make suggestions for services improvement. The CHMT perceived supervision as a way of disseminating new ideas and techniques and informing staff of changes in policies and guidelines. The integrated approach to support supervision was utilised, with quarterly on-site visits.

This supervision approach was valued for its use of supervision guidelines and checklists to facilitate activities, 'hands on' mentoring and teachings for skills transfer,

the use of logbooks that allows for written records of visits, on-site feedback to individuals or groups and routine meetings to discuss and resolve issues. It was noted that the activities of CHMTs were enhanced by the availability of tools that monitor health programmes and services like: The Health Management Information System hospital data book that contains records of facility level indicators; logs on supervisory visits; problems identified from support visits; and the Open Performance Review and Appraisal System used for assessing staff performance.

The success of this supervision approach in Tanzania had been premised on strong national commitment to addressing human resources for health challenges; the availability of national supervision guidelines that provide for a common mechanism for supervision the decentralisation of health service that is good for focused attention; and the regional level supervision mechanism through the CHMTs whose responsibility it is to ensure that routine supervision is done. Despite the above milestone in supervision in Tanzania, the system is still challenged by instances of irregular supervision visits; lack of autonomy of the CHMT to undertake certain critical decisions for supervisory improvement, competing priorities among CHMTs; and financial constraints.

Willis-Knighton Health System network, Louisiana, United States of America

The Willis-Knighton Health System (WKHS) service delivery network has utilised the hub and spoke OM model for over three decades. The WKHS, a private not for profit/ non-governmental health care provider with headquarters in Shreveport Louisiana, offers comprehensive health and wellness services through multiple hospitals, numerous general and specialty clinics and an all-inclusive retirement community home. Strategic hubs are located in Louisiana, with satellite spokes distributed up to a convergent area in the neighbouring states of Arkansas and Texas. The WKHS dates back to 1924, when it started to address the healthcare need of the population of West Shreveport and has since increased its capacity given population growth and expanded residential development in the region. Given the 'not for profit' orientation and the need to maintain its territorial mark, the WKHS chose the hub and spoke model to develop a multi-campus healthcare system for efficient and effective service delivery. In 2017, WKHS operated 1,290 licensed beds across five hospitals and one retirement community. The main west Shreveport campus serves as the hub for each of the satellite campuses.

The WKHS management indicates that the hub and spoke model has afforded the establishment a range of benefits:

- a) The organisation design affords significant command and control across associated networks of the healthcare establishment. A single governing board is responsible for system oversight. Policy directives are issued from the main campus/hub to the rest of the system, with administrators at satellite facilities being responsible for

implementation in their assigned establishments. The model creates a hierarchical organisation with authority extending from the hub outwards to the spokes. This yields a chain of command similar to that used in the military. The patients benefit from the standardisation of care associated with this approach which affords a consistent experience across facilities.

- b) The model supports elimination of duplication; demarcation of highly specialised services is associated with efficient use of resources and increase return on investments.
- c) The hub-and-spoke system offers opportunities for enhanced quality of services because of its ability to pool resources and expertise. The hub acts as a centre of excellence with the satellite sites contributing patient volumes for high quality services.
- d) The design facilitates expansion initiatives. Satellites are more limited in scope and therefore fewer investments are needed to establish new locations. The design provides for an agile healthcare organisation with flexibility for quick reorganisation capabilities for expansions when necessary or closure when there are risks and losses.

Some of the lessons learnt and the identified risks of the hub and spoke model that have been reported from the WKHS experiences include the following:

- a) There is potential for congestion at the hub. Steps must be taken to ensure that system-wide demands directed at the hub can be accommodated without difficulties. Staff availability, space requirements, logistics and supplies must be in place for an adequate response.
- b) Over extension of spokes from the main hubs has potential for delayed access to services for patients. Organisational principles including geographical coverage, types of services and patients and access to transportation (both personal and public) should be considered in designing hub and spoke models.
- c) Since authority runs from the hub outward to the spokes, satellite facilities operate under the auspices of the main campus. This is a potential area of discord as some staff might prefer more autonomy within their facilities. Work discontent, sense of isolation from the system, communication gaps are all potential enablers of dissatisfaction at spokes.
- d) The hub and spoke model requires well developed and reliable transport networks, with linkages between hubs and satellites critical for patients to realise the entire continuum of care.

Hub and Spoke model for affordable and accessible healthcare in rural India

India is a country with 70% of the population living in the rural areas and most of them living on less than US \$3 per day. There is poor network of transport and other forms of infrastructure across the country. Government focus has been on public

health programmes, with most of the curative services provided by the private sector. About 80% of health sector funding is in the private sector. The physical accessibility of public and private healthcare facilities is a challenge to most rural populations. There is good Information Communication Technology (ICT) capacity across the country.

A few private sector health service organisations have begun to implement hub and spoke healthcare models with the purpose of improving coverage and reducing costs in service provision. These organisations include iKure, Vaatsala Healthcare and Apollo Hospitals. The ICT enabled hub and spoke model is organised around a number of rural clinics and urban hospitals. The organisations develop strong connections to networks of doctors and facilities and negotiate for subsidised prices and reduced treatment fees for patients amongst these providers. Health workers in rural clinics are provided with laptops and connectivity to secure networks for routine data capture and related practices. The information is transmitted and stored on a secure community cloud network, controlled by the organisation. The data and information can be accessed and/or shared by the network of rural clinics and urban hospitals. Only approved users have access to these data and information, via laptops or mobile devices. Confidentiality of patient information is emphasised; access to patient information is given in case of referrals and user access can be layered by cadre or seniority.

This hub and spoke design has been credited for bringing together scattered health facilities and practitioners into a coordinated system and facilitating better utilisation of scarce resources through orderly progression of care and rational resource allocation. This is said to have facilitated optimum utilisation of specialists and equipment as well as skills development through performance of high volume focused procedures. The approach was said to have reduced transportation costs for poor populations and therefore improved access to healthcare services. This model also demonstrated that modern innovations can be used in rural and remote areas to reduce costs to end users.

From the experiences of these Indian-based healthcare organisations, the success of a hub and spoke mechanism of this nature was noted to be dependent on factors such as:

- a) The ability to attract and retain doctors in rural health facilities. This was noted as important for both services provision to clients and skills development for the doctors.
- b) Standard and appropriate treatment protocols to harmonise and unify the various care processes in the spokes in order to ensure good quality of health care services.

- c) The ability to attract the necessary volume of patients and clients to ensure optimum operations of the facilities, including performance procedures. This was important for spoke relevance and realising efficiencies.
- d) Attention to cost containment and reducing waste. In this case, technology was an important element for the appropriate functioning of the mechanism, supporting data and information management.
- e) Data completeness, accuracy and use. These were important aspects for healthcare facility coordination and response.

4.2 The Regional Referral Hospitals

This section provides highlights of the position of RRHs and their operations in the Uganda health system. It covers the legal policy and organisational management, the roles and responsibilities, the resources, provision of services beyond the hospital, performance assessment, and the challenges RRHs face in delivering health services. Consideration is also made of how the RRHs interface with the broader health system in terms of the health system building blocks, and supervision mentoring monitoring evaluation and coordination.

Legal, policy and organisation management

In the context of decentralisation (devolution) and the emphasis on PHC, the LG health system and primary and secondary care facilities have been the focus of health service delivery in the country. The National Health Policy (NHP) though recognises the critical role Regional Referral Hospitals (RRHs) and National Referral Hospitals (NRHs) have to play in the delivery of the UNMHCP. Uganda has fourteen (14) designated RRHs distributed across the country, namely: Arua, Fort Portal, Gulu, Hoima, Jinja, Kabale, Lira, Masaka, Mbale, Mbarara, Moroto, Mubende, Naguru and Soroti Hospitals. Mulago and Butabika Psychiatric Hospitals are the two NRHs.

The RRHs are semi-autonomous institutions, with Boards which are responsible for governance and oversight and ensuring appropriate implementation of the national policy. The RRH Boards are appointed by the MoH on the recommendation of the district councils within each individual hospital's catchment areas. Eight to twelve district LGs compose the catchment under each RRH. The Constitution Amendment Act of 2005 provides for services of RRHs as core functions under regional governments. However, this law has never been operationalised. The financial, material and human resources are managed by the RRHs in collaboration with other government entities. The RRHs were granted self-accounting status by MoFPED, under which arrangement the RRHs are direct recipients of funds from the national

budget for institutional functions and expend and account for these finances to the MoFPED and Parliament.

The Health Service Commission (HSC) is responsible for human resources planning, setting staffing standards, recruitment and guidance for human resource management at the RRHs. The Department of Clinical Services in the Directorate of Clinical Services of the MoH provides technical supervision to the RRHs. The Hospital Director has overall responsibility for the functioning of the RRHs and is the 'Accounting Officer' for public resources. The Director's role is a combination of clinical and management functions. Depending on the facility, there may be a Deputy Hospital Director. Top/Senior Management Committees provide routine support to implementation and practices at the hospital. The composition of Top/Senior Management Committees varies across RRHs.

Roles and responsibilities of Regional Referral Hospitals

The different levels of the healthcare system and the services expected to be provided under the UNMHCP were highlighted under **Section 1.2.1** of this report. The Uganda Hospital Policy elaborates RRHs service packages. In addition to services offered at the GHs, the RRH is expected to offer specialist interventions in the following areas: Medicine, surgery, obstetrics and gynaecology, paediatrics, psychiatry, ear-nose-throat (ENT) surgery, ophthalmology, dentistry, intensive care, radiology and pathology. These are delivered as inpatient and outpatient services. Each RRH serves a population of about 2,000,000 people. With the increased prevalence of non-communicable diseases like cancer, diabetes, hypertension and heart disease across the country, these specialised services are needed much more than ever before. A RRH is expected to support GHs and HCs within its catchment area through supervision and other forms of capacity building.

Regional Referral Hospital Resources

There is no single/specific structure that defines the operations and service standards for RRHs. The average RRH has bed capacity of 500, employs 350 members of staff and maintains the relevant health equipment. The definition of departments in RRHs and the level of functionality are in part determined by availability of human resources and infrastructure and equipment. Common to most RRHs are the departments of medicine, obstetrics and gynaecology, surgery, paediatrics, pharmacy, OPD, finance and administration and community health departments (CHD). Similarly, there is no standard staffing norms for RRHs; instead each institution operates individual staffing standards provided by the HSC. The broad categorisation of cadre groups under each Hospital's structures are: Senior Consultants, Consultants, Medical Officers Special Grade, Medical and Dental Officers, Allied Health

Professionals, Anaesthetic Officers, Orthopaedic Officers, Physiotherapy Officers, Occupational Therapists, Ophthalmic Clinical Staff, Radiographers, Laboratory Staff, Dental Staff, Pharmacists, Psychiatry, Nursing, Theatre Staff, Finance and Administration Staff, Procurement Staff, Maintenance Workshop Staff and Support Staff. The MoH 2015 health staffing audit indicates that on average staffing levels for RRHs were at 81%, up from 60% in 2013/14. However, there was wide variation across the country with severe shortages in Moroto (41%) and Mubende (55%), while by this reckoning Arua (108%) and Mbale (104%) are overstaffed. There are also marked gaps among the senior consultant and consultant cadres. It has been noted though that the norms do not necessarily reflect the level of workload. In 2012, Masaka RRH had a nurse to patient ratio of 1:13 – almost twice the WHO recommended level of 1:7.

Many of the buildings at the RRHs were built more than 40 years ago and require renovation. Some efforts have been made to undertake renovation and extension at the RRHs over the last decade. The bed capacity in some hospitals like Fort Portal, Masaka and Soroti has been increased by more than 50% which has reduced floor cases. Facilities for private wings and staff accommodation have been built in some of the RRHs in the recent past. However, staff accommodation remains a key challenge with up to 50% of staff in most RRHs not being accommodated at the health facility. Most of the RRHs have basic hospital equipment; on average each of the hospitals has a functioning x-ray and ultra sound machine. However most of them do not have sophisticated diagnostic equipment like Computerised Tomography (CT) scans; and the load per functional machine of the existing ones is very high.

Financing for the RRHs is mainly from the government budget. On average each of the RRHs receives 7 billion Uganda shillings per year; over 50% of which is for wages. In addition, each RRH receives medicines and commodities from the National Medical Stores worth about 1.2 billion Uganda shillings per year (average). Given an estimated 2,000,000 people each RRH is supposed to provide services to, the government budget provides approximately 4,000/= (four thousand Uganda shillings –equivalent to a little over 1 US Dollar) per person per year. RRHs also benefit from Development /Implementing Partner support mostly for HIV/AIDS care (e.g. Uganda Cares, SUSTAIN, Infectious Disease Institute), community outreaches (Amref Health Africa and WHO) and infrastructure (JICA).

Provision of services beyond the Hospital

The Community Health Department (CHD) of a RRH was established to provide a link between the hospital and the catchment population. The CHD is expected to coordinate the RRH's activities of supervision and mentoring in the catchment area with the purpose of contributing to improvements in the quality of health care

provided. Through the CHD the RRH is expected to work towards improving clinical practice especially at the GHs and HCs especially the HC IVs and to provide support to community health programmes. The main community health activities relate to: health education and sensitisation, immunisation, family planning, surveillance and disease control.

The CHD is the HSD facility for the district in which the RRH is located. The CHD is supposed to have a budget line under the RRH budget for its activities. Teams of specialists are expected to carry out supervision visits on a quarterly basis to GHs and HCs IV in the catchment LGs. Experiences and findings from the visits are supposed to be documented and recorded in the compiled activity reports, quarterly and annual reports. These reports are supposed to be shared with the LGs and health facilities, within the RRH and with the Quality Assurance Department and the technical programmes of MOH.

Some particular programmes have been organised over the last two decades to facilitate these functions of the RRHs. The MoH Clinical Services Department introduced the Consultant's Outreach Programme (COP) in the early 2000s. Through the COP the Department of Clinical Services mobilises financial resources from various DP/IPs and uses them to facilitate specialists at the RRHs to undertake field visits. The COP visits however have been irregular and infrequent due to a combination of poor availability of financial resources and the limited availability of the Consultants.

Some of the Professional bodies including Associations of Surgeons of Uganda have organised camps at GHs and HC IVs to provide service delivery closer to the population and to build skills of the health workers. However, these are usually ad-hoc. Another modality that has been utilised for RRHs to support lower level health facilities has been with regard to specific disease control services. For example, a number of IPs have supported some of the RRHs to act as diagnostic hubs for HIV/AIDS control activities. In such instances the hubs act to provide quality assurance and second line diagnostic tests that cannot be carried out at all the facilities due to lack of human resources and/or equipment. In such cases the GHs and large volume HC IVs and HC IIIs act as the spokes. The Health Sector Quality Improvement Framework and Strategic Plan (HSQIF&SP) provides for a Regional Quality Improvement Committee (RQIC). The HSQIF&SP prescribes the composition of the RQIC and their functions and responsibilities for regional health. The RRH through the CHD are members of the RQIC.

Regional Referral Hospital Performance Assessment

The MoH assesses performance of health facilities including HCIVs, GHs, RRHs and NRHs using the Standard Unit of Output (SUO) and other parameters like Bed

Occupancy Rate (BOR) and Average Length of Stay (ALOS). The SUO is a composite weighted measure of performance that includes admissions, outpatient attendances, deliveries, antenatal and postnatal visits, family planning uptake and immunisation. Generally, over the medium term, RRH performance has been improving with regard to the SUO- although wide variations in performance have been noted. In 2016/17 according to the SUO, Mbale (1,022,283) and Masaka (819,087) RRHs had the best performance, whereas Kabale (265,027) and Moroto (205,156) had the lowest. It is notable that Mbale RRHs performance on the SUO was about 5 times that of Moroto RRH. There is also a wide range in performance with regard to BOR and ALOS. These statistics show high levels of utilisation of primary and secondary levels services at the RRHs which tends to suggest poor levels of access and/or functionality at the GHs and HCs.

A number of additional indicators for RRHs were introduced in the recent past including efficiency measures (recurrent cost per SUO, recurrent cost per bed) and quality of care measures (maternal death risk, fresh still births) and the number of major surgical procedures. The average performance on recurrent cost per SUO in 2016/17 was 2,932 with Mbale as best performer (1,458) and Kabale as the worst performer (6,414). The Caesarean Section Rate was at an average of 28% with the lowest in Masaka (7%) and the highest in Nsambya and Soroti Hospitals (48%)⁹.

Maternal death risk was at an average of 351 per 100,000 deliveries with the lowest at Gulu (48/100,000) and the highest at Fort Portal (719/100,000). The fresh still birth risk was at an average of 18 per 1000 deliveries, with the lowest at Gulu and Lubaga (7/1000) and the highest at Hoima (35/1000). These measures of quality of care show a wide range of performance across the RRHs with poor scores in a number of the hospitals. However, a gap in performance assessment at RRHs and NRHs has been noted. Current performance assessment modalities do not provide for assessment of the specialist services and the support function. Yet these are the peculiar roles and responsibilities of the NRHs and RRHs. Current assessment modalities do not take into consideration the complexity, sophistication and intense resource requirements for the delivery of specialised services.

Regional Referral Hospitals and the health system building blocks

This subsection provides explicit consideration of the interface of the RRH with the broader health system with specific regard to the health system building blocks. The RRHs play varying roles in regard to the health system building blocks of medicines and commodities management, information management, health workforce management, health financing and governance and leadership. Within the RRH the

⁹Note that these statistics include large/specialized PNFP facilities like Nsambya Hospital

management of the building blocks is shared between the hospital and other entities like National Medical Stores for medicines and commodities, and the Health Service Commission for human resources. Beyond the hospital, with a few exceptions, the RRHs have very limited role on the management of the health system building blocks. Some of the exceptions include the involvement of Regional Pharmacists in medicines management in the catchment LGs, and the use of HMIS and other sources of data for disease surveillance by officials in the CHD of the RRHs. Such instances are usually provided for by guidelines from the MoH.

Regional Referral Hospital Challenges

There are a number of challenges that RRHs are facing, which are limiting their performance across the range of responsibilities. These include the following:

- a) There are resource gaps at the RRHs, related to finances, human resources and infrastructure including buildings and equipment. This situation has been exacerbated by the challenges in service delivery at the HCs and GHs which lead to congestion at the RRHs and NRHs. There are marked gaps in the human resources especially at the Consultant and Senior Consultant levels; and in terms of diagnostic and therapeutic equipment. The RRHs finances are not inadequate for procurement of optimal medicines and supplies, utilities and for supporting field activities.
- b) There are gaps in the quality of health services provided at the RRHs, as shown by the quality of care indicators. This is likely to be related to the poor levels of resourcing. However, the variation in performance may be due to management and supervision challenges at some of the RRHs.
- c) The RRHs relate poorly to the Ugandan administrative/political structure that provides the basis for supervisory authority. The 2005 Constitution Amendment which provides for a regional level of government in which the RRHs are explicitly reflected has never been implemented. The LGs do not recognise the RRH role in providing supervision mentoring monitoring evaluation and coordination especially regarding policy engagement and systems management.
- d) Currently there is limited clarity in terms of roles and responsibilities of regional level health system stakeholders which often leads to poor coordination, duplication and gaps in coverage. Lack of commitment has been noted from regional health managers for supervision mentoring monitoring evaluation and coordination activities including QI processes and management meetings.
- e) The RRHs are semi-autonomous and self-accounting (reporting to MoFPED and the Parliament) and technically supervised by the MoH. This creates a degree of blurring of authority lines.
- f) The CHD in the RRH is usually not a priority unit given the clinical focus of the facility. As such the CHD is often not well facilitated in terms of funds, human resources and logistics. In most hospitals for example, the CHD is only managed

by one doctor and one nurse/midwife. The proliferation of LGs has put pressure on the RRH/CHD; making it more difficult to reach all of the districts in the catchment area for supervision on a regular basis.

4.3 Learning from experiences of implementing different Organisation Management models in Uganda and beyond

This section presents an analysis of the experiences in implementing the various OM models documented under **Section 4.2**, with a view to identifying similarities and differences as well as the facilitating and inhibitory factors. A number of categories were previously used to present the OM models. Commonalities and differences have been identified within and across these categories. A summary of these findings is also presented in Annex 5. The analysis was used to inform lesson learning for the Ugandan health system, taking into consideration the specific context.

Organisation Management models commonalities and differences, facilitating and inhibitory factors

The OM models implemented by the MoH and affiliated institutions, included health system-wide and programme/dimension focused ones.

The findings of this study are that the MoH managed health system-wide OM models, the Area Teams and RPMTs, were developed explicitly to fit into the Ugandan decentralised context (devolution) whereby LGs especially districts have the mandate to manage the delivery of the services within their territory while the MoH has the mandate to provide supervision and facilitate the LGs to ensure good quality health services. OM models like Area Teams are well aligned with health system routines and procedures including budgeting and planning processes, internal supervision, information management systems (like the HMIS) and performance reviews. The good fit in terms of governance arrangements facilitates the development of rapport between supervisors and LG health system managers (political, administrative and technical) and health workers. Such a set-up has fostered efforts to formulate solutions for some of the challenges facing LGs and health facilities as it links with decision-making processes. The longevity of the Area Team model of 14 years of operation is likely due to the good fit with the broader governance/health system framework, clear positioning within the MoH and the existence of a government budget line for some of their activities. The short life span of the RPMTs on the other hand is likely due to poor sense of ownership of the entity by the mainstream MoH and the almost exclusive funding by a DP.

A number of challenges have been noted with these models. The Area Teams and RPMTs, especially over time, have tended to be less effective than expected due to:

few and poorly planned supervisory visits; poor involvement of senior staff of the MoH in supervision mentoring monitoring evaluation and coordination related activities; and poor supervision and poor follow up of findings at all levels. These challenges can be related to inappropriate resources (magnitude and timeliness) and poor prioritisation of supervision mentoring monitoring evaluation and coordination activities at all levels of the public health system. Another challenge that has been noted with system-wide models is the tension that develops in trying to provide a continuum of support covering policy engagement, systems and programme management and capacity building for clinical care. The tendency during implementation of health system wide OM models has been to put more emphasis on the policy and management support at the expense of technical programming and capacity building for clinical care.

The second group of MoH-managed OM models, focusing on one technical/system programme, included the Regional Pharmacist Programme and the TL Zonal Officers. The two models have a narrow focus –one programme each – but in terms of the dimensions of supervision mentoring monitoring evaluation and coordination attempt to cover the whole range from policy engagement, through system management, technical programming and support for clinical care. These models are fairly well aligned with governance structures, in some case with specific adaptations for example at community level. The models also relate fairly well aligned with routine public health system procedures, sometimes with adaptations. For example, the TL Zonal offices previously ran separate MIS and commodities management, which have recently been integrated into the mainstream health system provisions. Both models work through regionally based staff with delegated authority from the MoH. The difference between them is that the Regional Pharmacists Programme utilises a pharmacist who is an employee of the RRH; whereas the TL Zonal Officer is contracted by the MoH/NTLP and has no administrative linkage with the RRH. These models tend to be well championed by the programme managers and some Development Partners and in the short to medium term are fairly well resourced.

However, the programme-based models have faced a number of challenges too including: difficulty in sustaining the programme after DPs pull out; and tension with regard to the optimum balance between the clinical dimension of support and the other dimensions of supervision mentoring monitoring evaluation and coordination. It is important to note that there are technical programmes that do not have such well-developed regional/zonal support programmes. This therefore means that there is inequity in terms of the provision of support to LGs in in respect to technical programme coverage and inefficient use of resources with programmes developing parallel structures.

The RHITES South West managed DBTs was studied as an example of OM models implemented by DPs/IPs. The DBT model is an attempt by an IP to provide health system-wide support, with emphasis on some disease control programmes/health conditions. The model covers the dimensions of support for clinical care and programme management; together with some aspects of systems management relating to project priority programmes like HIV/AIDS control; with minimal policy engagement. A major facilitating factor for the RHITES South West OM model is the adequate and well-planned resources including human, financial and logistics. The model also supports innovation and flexibility, in response to identified challenges. However, a key challenge is poor alignment with the governance structure, which creates challenges with influencing corrective decisions at the different levels of care and management. The RHITES SW is a DP-supported short term project and as such there is limited government ownership and poor chances of sustainability of the programme in its present form.

The IGG and the UPF have developed OM models to support their work across the country. It is notable that both these institutions operate the deconcentrated model of decentralisation, with centralised management, with the exception of a few administrative and service delivery functions delegated to peripheral offices. There is a limited role in the management of these entities by the LGs; the relationship between them is largely collaborative. This arrangement differs from that of the health sector which is devolved, as is provided for in the Constitution and various statutory instruments. Both organisations run regional offices; however, the difference is that whereas the UPF goes all the way to the parish level, the IGG has no presence beyond the regional level. The Inspectorate of Government a relatively small organisation has developed an administrative structure at the regional level that supports flexibility in operations. The highly centralised system of the UPF and inadequate resources constrain the delivery of good quality services in this sector.

Ghana and Tanzania share similarities with Uganda in that they are decentralised LMICs, in sub-Saharan Africa. The mode of decentralisation in the health sector in these countries is also devolution with LGs at the lower levels which have responsibilities for managing and delivering health services. The OM models studied in both these countries run from an intermediate level, the region, in recognition of the functional and geographic distance from the national level to the districts. In both models there are LGs and health management teams at the regional and district levels. In both countries specific approaches were used for the purpose of improving quality of health services accessed by the population, with emphasis on supportive (or facilitative) supervision cascaded through the different levels of the health system. The OM models are very well documented; clearly indicating the expected activities including reporting at the different levels of the health system. These models share a number of commonalities with the Uganda MoH health system models including

alignment with governance structures and the challenges of poor resourcing and limited follow up of findings and decisions.

The hub and spoke OM models from India and the United States of America which were studied were being implemented in the private sector with a focus on the provision of clinical services and the objectives of providing good quality services while maximising efficiencies for the provider and the patient. The US model operates as one centrally owned and managed organisation with the traditional command and control set-up, whereas the India model brings together different service providers with similar objectives with the use of IT. There are differences in the levels of income and the availability of infrastructure in these countries served by these two models; however, the model has been adapted differently to suit the context. A key difference between these two models and the other models studied is that in both India and the USA, there are no provisions for the involvement of government/public management structures in the management of the model. These hub and spoke models have been implemented in the private sector, focusing on clinical provision of services at the facilities.

The Ugandan RRHs are involved in a number of activities to support LGs and health facilities for the provision of quality health services. A number of these activities are coordinated by the CHD and supported by the MoH, DP/IPs and other entities. However, these activities are irregular and not well planned. The RRHs tend to be poorly facilitated to carry out the activities outside the hospital and in addition the hospital management and staff tend to give them low priority. The relationship of the RRHs to the GHs and HCs is the closest to the typical hub and spoke model in the Ugandan health system. However, a number of differences can be noted with this Ugandan hub and spoke model and the models of USA and India.

- The US and India models operate in the private sector, whereas the focus of the Ugandan health system that was reviewed in this assignment was the public sector (public sector RRHs are supposed to provide support to both public and PNFP facilities).
- The US and Indian models focus on clinical care – the Uganda RRHs is expected to support the health facilities and catchment population in both clinical and public health aspects, including disease surveillance;
- The role of government is limited with regard to the USA and Indian models – whereas in Uganda, the government at the different levels has a big role to play in managing the public health system. In particular, the various levels of government have a key role in regard to the health policies and systems management (including human resources management, data management, mobilisation and allocation of resources) and providing accountability to the population.

Lessons learnt from Organisational Management models in the Ugandan health system and beyond

Various OM models are being implemented in the country and elsewhere. In this subsection the Consultant utilises the findings on the experiences with the different models and appreciation of Uganda's context, to highlight a few points to support lesson learning.

- A. The relationship of a model with the context has implications for its acceptability, effectiveness and sustainability. The study shows that this works through a number of pathways:
- LG health system managers and health workers respond to the mandates of the supervisors;
 - Coherence with routine systems e.g. for data/information management, human resources management, budgeting and planning and performance reviews facilitate the application of supervision monitoring and mentoring outputs to support decision-making;
 - Resources from government and other sources including communities can be leveraged to provide solutions to identified problems;
 - Leaders and managers at the different levels of the health system can act as champions for the OM model and for identification and implementation of solutions.
- B. A number of stakeholders are playing key roles in the efforts to improve the quality of population health broadly and specifically in the development, implementation and evaluation of OM models. It is important to recognise and engage these stakeholders appropriately given the mandates, responsibilities and comparative advantages. This will facilitate the effectiveness and sustainability of OM models and minimise overlap and inefficiencies.
- The government has a stewardship, policy formulation, priority setting, resource mobilisation and allocation, coordination and implementation roles. Specifically, the MoH has the responsibility to bring together different stakeholders to develop appropriate OM models, implement them, mobilise the necessary resources and act as champions. The LGs have responsibilities with regard to participating in the development of OM models, their implementation and the uptake of findings into decision-making. Other public institutions that have key roles include Ministries of Finance and Public Service, National Medical Stores and Health Service Commission.
 - DPs/IPs have crucial roles of providing technical and financial resources for the development, implementation and evaluation of OM models.

DPs/IPs can particularly play a role of innovation, given their flexibility, research and networking resources.

- C. Challenges often exist in balancing the focus of OM models with regard to the dimensions of policy engagement, systems management (relating to the different health system functions), technical programming and support for clinical care. OM models managed by MoH and related entities tend to focus on policy engagement and systems management whereas those by RRHs and IPs are more likely to focus on technical programming and clinical care. It is important to relate and balance these different dimensions of supervision monitoring, mentoring, evaluation and coordination, as they are all required for optimal functionality of the health system and provision of good quality health care.
- D. The Ugandan model of decentralisation is devolution whereby the different levels of government contribute to the management of health services. The approach to achieving the health sector goal of UHC puts emphasis on Primary Health Care including curative, preventive and promotive health services. Community participation and a multi-sectoral approach to health are considered important from both the health system and decentralisation perspective. However, the proliferation of LGs has resulted in geographical and functional distance between the national and the LG levels. Other countries with similar contexts have utilised the regional level to support a more effective and coherent sector. Despite the 2005 Constitutional Amendment providing for the regional government this has never been operationalised in Uganda. Some of the other sectors in the country practise deconcentrating – whereby sectoral structures are developed at regional level that take on some of the responsibilities of the national level, in the absence of a (political) government at that level.
- E. There is lack of clarity and coherence with regard to the legal and policy provisions, resourcing and the roles and responsibilities indicated for the RRHs in the various government documents. In particular, the responsibilities of the RRHs in the catchment population are not appropriately supported by the legal and policy framework or the resources and logistics.
- F. The appropriate implementation of any OM model requires availability of optimum resources which are available in a timely manner. A major challenge for government-led OM models is inadequacy of resources. MoH programme based and DP/IP implemented OM models often have adequate resources in the short to medium term, but as they run with project cycles, they are not sustained.

- G. There are major challenges of using information from the implementation of various OM models to support decision-making and improve the health system. This can be attributed to a number of reasons including: poor resourcing of the various levels of the health system; mismatch of stakeholder mandates, roles and responsibilities; and a poor learning culture.
- H. It is important to have a well-developed and documented OM model with clarity on the cascade of activities, records management, communication guidelines and checklists.

5 Proposals for new/updated Organisation Management models for the Ugandan health system

The goal of the Uganda health system is UHC, which refers to the state where all people in the country can access the health services they need, which are of sufficient quality, without them being exposed to financial hardship. Major gaps have been identified in the quality of health services available to the Ugandan population. Key health system stakeholders have interest to change the poor quality of health care in the country. The Consultant reviewed previous efforts aimed at improving the quality of health services in the country through the implementation of various OM models in order to provide understanding of where the sector is and why, and identify facilitating and inhibitory factors. She also reviewed some OM models in other sectors and in other countries in order to appreciate how they are approaching this.

In view of the findings and analysis documented in **Section 4**, the Consultant makes the following proposals for consideration by the Ugandan health system stakeholders for improving/updating the country's OM model. The proposals are for a comprehensive approach towards providing supervision mentoring monitoring evaluation and coordination in the health sector and for the different stakeholders to play their appropriate role within this broader framework.

The Consultant proposes three options namely:

- Option 1 - Reinforce the current structures and mandates, with no new structures to be introduced.
- Option 2 - Establish a new structure of Regional Health Offices and give them a major role in supervision mentoring monitoring evaluation and coordination at the regional level
- Option 3 - Broaden the role of the RRH to explicitly include a comprehensive supervision mentoring monitoring evaluation and coordination role within the catchment area

All these 3 options focus on the structures and mandates from the national through the regional to the district level and presuppose internal supervision within the LGs. The current framework for internal supervision within the LGs is not functional and would need to be rejuvenated for the entire system to work as expected. The options cover both the public and facility-based PNFP health facilities even though they do not cover the private health providers explicitly. The key features, pros and cons of each of the proposals are presented below.

Option 1: Reinforce Current Structures and Mandates

In this option, the Consultant does not propose any major changes in terms of the structures and institutions of the health system and beyond. Rather the proposal is to implement efforts to improve the functionality of current supervision, mentoring, monitoring, evaluation and coordination approaches and streamline some of the operations within current structures and mandates. Option 1 is illustrated in **Figure 6**; the arrows connecting the different boxes represent different relationships which may be supervisory, collaborative or corresponding to specific dimensions of the management functions.

Some specific features under Option 1:

- Rejuvenate the Area Teams by responding to some of the weaknesses that have been highlighted. Areas that require improvement include: planning/scheduling to improve frequency and regularity of field visits; reviewing packages of support in relation to all dimensions of supervision mentoring monitoring evaluation and coordination; participation of senior MoH officials; and explicit consideration of findings and provision of feedback. Key requirements for these improvements include increasing resources for the Area Teams including designated officials from various MoH programmes and financial and logistical resources. Efforts would also be required to improve appreciation of supervision mentoring monitoring evaluation and coordination and its improved supervision and use of findings for decision-making. The consideration of Area Team reports in established sector fora like Senior and Top Management meetings and quarterly performance review meetings would be one way to achieve these improvements.

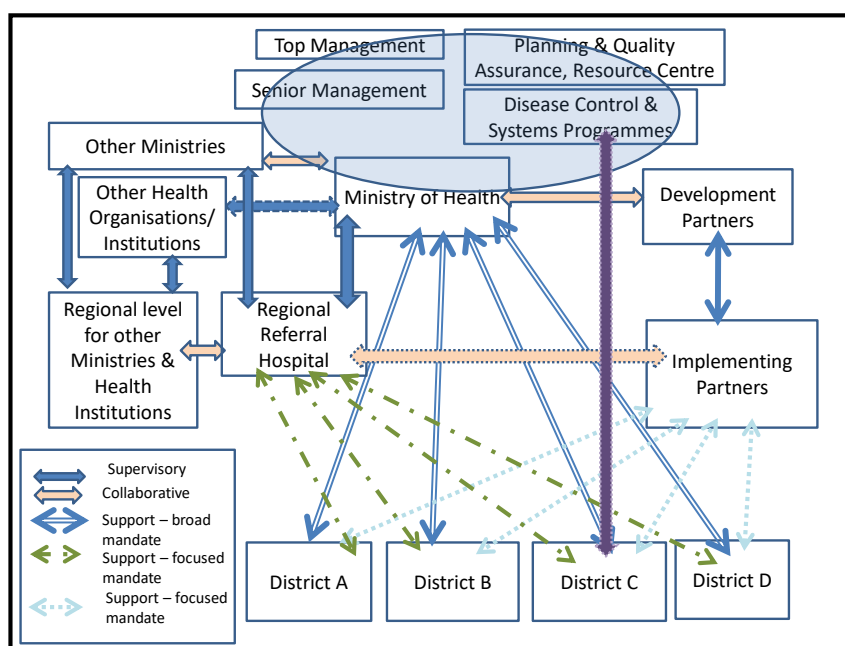


Figure 6: Option 1 Health Sector Organization Management Structures and Mandates

- The support provided by various technical and system programmes of the MoH should be reviewed particularly with a view of consolidating/integrating this support in the medium to long term. The integration of information and logistics management of some of the programmes like TB and HIV/AIDS into the mainstream arrangements has shown that this is feasible. The role of technical programmes would need to be re-scripted to support optimal delivery of services in the LGs and health facilities in the decentralised context.
- Improve the support provided by the RRHs for capacity building for clinical care to GHs and HCs and public health services in the LGs. Improve the frequency and content/package of the support and follow-up of findings; as well as the resourcing and supervision of this modality of support. The operations of this modality should be closely related to the operations of the Area Teams through debriefing sessions, sharing of reports and developing solutions for observed challenges.
- DPs/IPs providing direct support to LGs and facilities should continue in the short to medium term, as strategies for exit of this modality are prepared. The MoH and DPs/IPs should work together to support the building of the institutions to carry out this responsibility in the medium to long term. Options for medium to long term support may include close collaboration between IPs and Area Teams covering the regions the IPs are active in.

Key Features of Option 1

- Rejuvenate the Area Teams to provide supervision mentoring monitoring evaluation and coordination to the LGs and health facilities
- Improve support provided by the RRHs to GHs and HCs for improving clinical care
- No new structures are required

The advantage of Option 1 is that no major legal/policy/structural adjustments are proposed with this model. The implication of this is that implementation of this Option may not be associated with ill feeling/resentment amongst the major health system stakeholders. In addition, the implementation of this model may require relatively less new resources (financial, human or logistical) as no new structures are being proposed.

However, the implementation of this option may not result in marked improvement in the operations of the health system, including improvements in quality of healthcare as it may be “business as usual”. The option does not respond to the key challenge of the geographical and functional distances between the national level and LGs and health facilities.

Option 2: Establish a Regional Health Office with Supervision Monitoring Mentoring and Coordination Responsibilities

Under this option, the Consultant proposes that a Regional Health Office (RHO) be established with the purpose of coordinating all health system stakeholders and activities at the regional level. The RHO would be responsible for ensuring that the whole range of supervision mentoring monitoring evaluation and coordination activities are carried out within the region. The aspects of supervision relating to policy dialogue and systems management would be handled by the RHO directly, whereas aspects of support for clinical care and programme management would be carried out by the RRH in close collaboration with the RHO. This would be the equivalent of two closely overlapping and interconnected hubs- the management/public health and clinical care hubs. The RHO would also work closely with other health system stakeholders with quality of care mandates like the Professional Councils at this level. The RHO would also work with other entities at the regional level to support the multi-sectoral approach to health.

The Consultant proposes that the RHO operates under the delegated authority of the MoH, which would be responsible for supervising the RHO. This is possible even without the operationalisation of the regional government as provided for by the 2005 Constitutional Amendment across government. Other sectors and organisations like the UPF and the Inspectorate of Government have been able to operate regional level structures. It would be necessary to set up the RHO with appropriate staff, logistical and financial resources. Under this Option, the DPs/IPs would support the building of capacity at the MoH and RHO, as they exit from direct support to LGs and health facilities in the medium to long term. The relationships in Option 2 are illustrated in **Figure 7**.

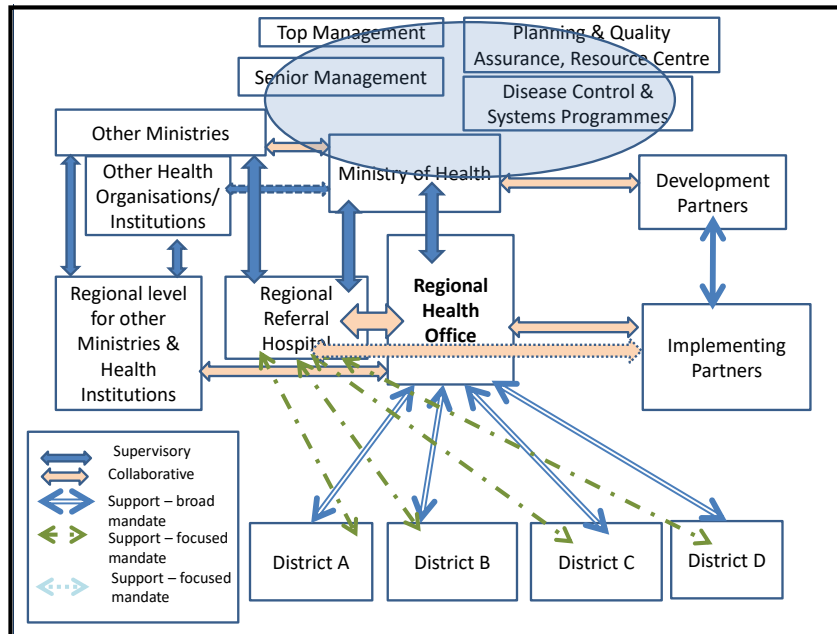


Figure 7: Option 2 Regional Health Office with Supervision Monitoring Mentoring and Coordination Responsibilities

A major advantage envisaged with this approach is that the existence of the RHOs would bridge the gap between LGs, health facilities and communities with higher levels of government. In addition, this governance/administrative arrangement would give the RHO the necessary authority to provide oversight of the LGs and health facilities and coordinate different health system stakeholders at the regional level. This option would support a multi-sectoral approach and leverage the different levels of government and communities to contribute to improvements in health. This OM model if well implemented has the potential for stimulating positive change in the Ugandan health system.

- Key Features of Option 2**
- Establish a new structure the RHO with broad health system management mandates incusing supervision, mentoring, monitoring and evaluation and coordination
 - The RHO would work closely with the RRH to offer comprehensive support to LGs and health facilities.
 - This would be the equivalent of two closely overlapping and interconnected hubs

However, potential challenges with Option 2 would arise from the process of creation of a RHO with recognised mandate to provide oversight to the LGs which requires significant buy-in from key health system stakeholders especially the Ministry of Local Government, Ministry of Public Service, Ministry of Finance Planning and Economic Development and LGs. A policy instrument may be required to support the establishment of the RHO. However, it should be possible to justify this as it has been done in other sectors including the UPF and the Inspectorate of Government. A key disadvantage is that substantial human, financial, infrastructural and logistical

investment is required to establish a new structure. To overcome this challenge, a medium term plan for the establishment and operationalisation of this Option can be developed and supported by Government and DPs in a phased manner.

Options 3: Broaden the mandate of the Regional Referral Hospitals to include Supervision Monitoring and Mentoring and Coordination at the regional level

Under this option, the Consultant proposes that the mandate, roles and responsibilities of the RRHs are extended to explicitly provide for: supervision mentoring monitoring evaluation and coordination across the clinical, programmatic, system management and policy dialogue dimensions; coordination of all health system stakeholders at regional level; and multi-sectoral collaboration. The RRHs in this model would effectively function as the RHOs in addition to their current core role of providing primary, secondary and tertiary clinical care. The CHD would take on the role of Regional Support Team. The Regional Support Team would take on these new/expanded responsibilities as a delegated function from the MoH and would be supervised by the MoH as per changed responsibilities. Option 3 is illustrated in **Figure 8**.

The DPs/IPs are expected to support the MoH and the RRH to carry out the responsibilities as per changed schedules, as they exit from direct support to the LGs and health facilities in the medium to long term. This is the closest to a hub and spoke arrangement running from the RRH, covering all dimensions of supervision mentoring monitoring evaluation and coordination.

A major advantage of Option 3 is that already existing resources at the RRH (human, financial, infrastructural and logistical) and functional networks that have been built over time given the existence of the facility in the region can be exploited. In particular, some competencies for supporting capacity building for clinical care and programming already exist at the RRHs

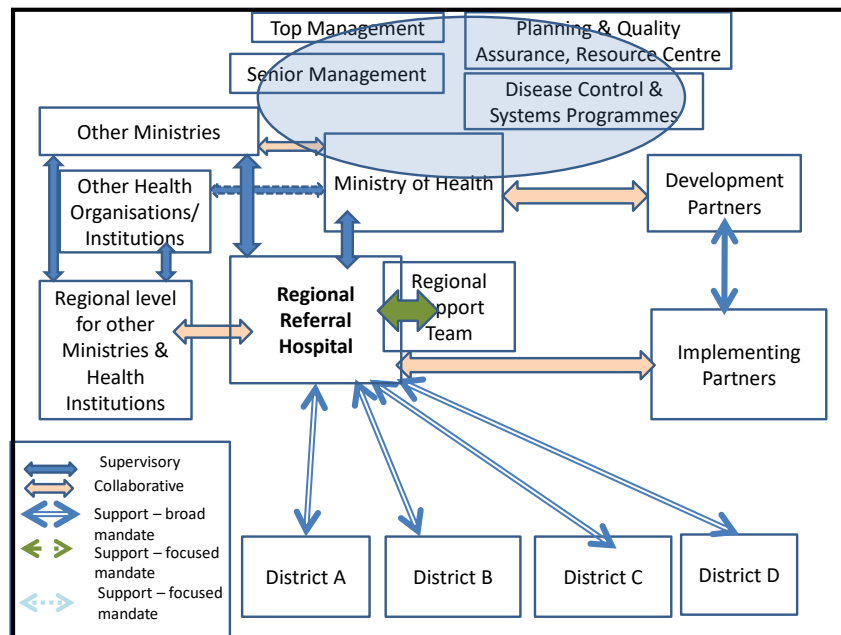


Figure 8: Option 3 RRH with Broadened Responsibilities for Supervision Monitoring Mentoring and Coordination at the Regional Level

However potential challenge with Option 3 is that its implementation is likely to require change to the governance status of the RRHs, especially with regard to the way they relate to the LGs and health facilities. This change would be required to give the RRHs the authority to provide comprehensive supervision mentoring monitoring evaluation and coordination covering the aspects of policy dialogue, systems management, technical programming and supporting capacity building for clinical care. The current laws/regulations/policies do not provide for this. A number of stakeholders would need to be consulted on this including: Ministry of Local Government, Ministry of Public Service, LGs, Cabinet and possibly Parliament. This is likely to be a sensitive matter given that LGs may not want to secede some of their constitutional powers to another institution. In addition, the current semi-autonomous and self-accounting status of the RRHs may be a challenge as the RRH in effect has several central government entities they are accountable to.

Key Features of Option 3

- Broaden the mandates of the RRHs to include Supervision, Monitoring and Mentoring of the LGs and health facilities
- This is a substantive shift in the governance/management of the health system and would require legislation/policy guidance
- This would be the equivalent of coalescing the management and service delivery hubs into one

It is likely to be challenging for the RRHs to provide the support with regard to all supervision mentoring monitoring evaluation and coordination dimensions and provide the appropriate balance of the broader governance/management roles versus support for clinical care. It is also likely that given the clinical orientation of the RRHs

it will be challenging for the facility to support the broader multi-sectoral approach to health. Implementation of this option requires additional resources although it may be theorised that these will be less than what is required for Option 2. The RRHs are currently underfunded for their current responsibilities; therefore, for optimum functionality more resources will be required given the proposed new responsibilities. In particular, more specialists should be made available and finances and logistics for frequent and regular field work.

Recommendations for next steps for Uganda health system stakeholders and USAID

The Consultant has proposed a set of options for adjustment of the Ugandan health system OM models based on experiences from Ugandan and other countries, as per the purpose and objectives of this assignment. The broader assignment objectives indicated the need for further engagement among the Ugandan health system stakeholders to build consensus on the option(s) to choose as a country. In view of this, the Consultant is proposing the following steps.

The MoH and Uganda health system stakeholders should develop a comprehensive, strategy and acceptable approach to OM that will galvanise all the stakeholders in the Ugandan health system to deliver on their responsibilities for improvement on quality of care.

USAID as a major player in the Ugandan health system should engage and support the MoH to initiate actions for revitalising OM at the various levels of the health system. In the short to medium term, USAID should:

- A. Discuss and internalise the proposed OM models for Uganda;
- B. Support processes for wider stakeholder discussions of the proposed OM models;
- C. Facilitate the process to provide detailed information on resource requirements and feasibility of the proposed OM models;
- D. As stakeholder consultations go ahead, USAID could in the meantime support the implementation of some of the OM models in the region/districts they support for purposes of learning lessons.

Annexes

Annex 1: Concept Note on Hub and Spoke Review

Annex 2: List of Key Documents

Annex 3: List of Key Informants

Annex 4: Tool for Data Collection from KII

Annex 5: Highlights of OM models