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Uganda Country Report

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Uganda country report

Authors: Adelaine Aryaija Karemani
Paul Mubiri
Justine Namukala
Wesam Mansour
Tim Martineau
Joanna Raven
Freddie Ssengooba

Improving health workforce performance

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List of abbreviations

AR	Action research
CAO	Chief administrative officer
CRT	Country Research Team
CW	Consortium workshop
DC	District Council
DG	District Group
DHMT	District Health Management Team
DHO	District Health Officer
DDHS	District Directors of Health Services
EC	European Commission
eDHMT	Extended District Health Management Team
HCIV	Health Centre IV
HSSP II	Health System Strategic Plan
HRH	Human resources for health
HRM	Human resource management
HSC	Health Service Commission
HRH2030	Human Resources for Health 2030
ICA	Initial Context Analysis
iHRIS	The human resource information system
LSTM	Liverpool School of Tropical Medicine
MoLG	Ministry of Local Government
MoLoGRD	Ministry of Local Government and Rural Development
MoPS	Ministry of Public Service
MOH	Ministry of Health
MSI	Management Strengthening Interventions
NGO	Non-governmental organisation
NSSG	National scale-up steering group
PDSA	Plan, Do, Study/Check/Reflect, Act
PI	Principal investigator
PP	Paired partner
PY	Project year
QA&I	Quality Assurance and Inspection
QI	Quality improvement
QIF	Quality Improvement Framework
QISG	Quality Improvement Support Group
QMD	Quality Management Directorate
QMT	Quality Management Team
RT	Resource Team
SMEAR	Supervision, Monitoring, Evaluation and Research
TWG	Technical Working Group

TB	Tuberculosis
ToC	Theory of Change
TORs	Terms of References
WHO	World Health Organization
UHC	Universal Health Coverage
UNICEF	United Nations International Children's Emergency Fund
HSD	Health sub-district
HCIV	Health Centre IV
HRM	Human Resource Management
MTRAC	Mesa Traffic Restriction Alerts and Closures
USAID	United States Agency for International Development
VHT	Village Health Team

Executive summary

The PERFORM2Scale project aims to develop and evaluate a sustainable approach to scaling up a district-level management strengthening intervention (MSI) using action research cycles in different and changing contexts. District health management teams (DHMTs) analyse their workforce performance and service delivery and develop work plans (**plans**), after which they implement their work plans (**act**) and reflect and learn about management from the experience (**observe** and **reflect**).

The report uses various data sources collected over the course of the implementation of the project. The project used process and outcome evaluation approaches to learn about the MSI and scale-up strategy. The process evaluation included interviews with district health managers, National Scale-up Steering Group-Focal Person (NSSG FP), Resource Team members (RT), and Country Research Teams (CRT). The outcome evaluation included key informant interviews with DHMTs, CRTs, and RTs, plus quantitative data from DHMTs and health workers.

Key findings

This report presents the results of scaling-up the MSI, currently being implemented in nine districts across three regions in Uganda (Central, Rwenzori, and Eastern regions) and future plans.

On scaling-up the management strengthening intervention, first, the MSI was implemented in three districts in 2018 and scaled up to nine districts by 2021. Secondly, the project integrated a Human Resource Management (HRM) component, or health worker performance, into the national Quality Improvement Framework 2020–25 (QIF) that was previously not included and is currently awaiting approval by the Ministry of Health (MoH). A key driver of integration was that the MSI and QIF are similar both in design and approach.

The scale-up of the MSI is mainly hinged on three factors that facilitate the process: 1) contextualised approach, which involves embedding into existing structures if available, enabling more stakeholders to be convinced and assisting in the removal of many barriers; 2) strong collaboration, which ensures guidance of the process and channels of scale-up; and 3) involvement of the resource teams, which aids the development of champions but also, to some extent, sustainability.

In terms of stakeholders, political and economic structures that could influence the scale-up of the MSI were available. At the national level, the Ministry of Health was identified as a critical power centre, while at the district level the technical wing under the chief administrative officer was pinpointed. Various stakeholders were identified and their levels of influence and interest gauged. However, for scale-up to happen, there is a need for continuous engagement and persuasion of stakeholders using evidence (mainly quantitative evidence).

As far as strengthening management competencies of the DHMTs at the district level was concerned, the MSI was effective in improving management skills, including problem identification, root cause analysis, development of feasible strategies, and workplan development. The MSI

resulted in improved teamwork, coordination, confidence, capacity and, in some instances, knowledge transfer to lower-level managers. However, the collective effects of the MSI on service delivery and changing perceptions of health workers at low-level facilities were not fully realised. There was no trickle-down effect of the management competencies from the DHMT to lower-level managers.

The facilitator factors of the MSI were: ownership of the problem by the DHMTs, the 'no additional resources' approach, tools provided by the project, facilitation skills of the CRTs and RTs, interactions between the DHMTs, CRT and RTs, and shared learning across districts. The hinderances included failure to identify and properly diagnosis the problem by DHMTs, lack of reflection of the process, no additional resources to implement, a national election, staff transfers and COVID-19.

Finally, the MSI intervention components in Uganda were incorporated into the QIF. As a result, the QI strategy 2020-25 will be strengthened, and it is expected worker performance will improve. Although the MSI was not scaled up as originally envisaged, crucial lessons were learned that may be applied to other comparable programmes. Contextual considerations were the most important component in facilitating scale-up.

Introduction

Improving health workforce performance is critical to achieving Universal Health Coverage (UHC). A management strengthening intervention (MSI) for district health managers to improve health workforce performance was tested in three African countries during the PERFORM project between 2011 and 2015. Management teams solved workforce performance problems, within existing resource constraints, that improved service delivery and helped them to become better managers.

To have a wider impact, and thus contribute to UHC, this MSI is being scaled-up in the PERFORM2Scale project in Ghana, Malawi and Uganda. The overall aim of the project is to develop and evaluate a sustainable approach to scaling up a district level management strengthening intervention (MSI) in different and changing contexts.

This MSI uses an action research (AR) approach to enable the district health management teams (DHMTs) to:

- analyse their own workforce performance and service delivery problems and develop appropriate workplans (**plan**),
- implement the workplans (**act**) and
- learn about management from the experience (**observe** and **reflect**).

PERFORM2Scale has adapted a systematic approach for scale-up that has been developed by ExpandNet and WHO and tested in many contexts [1]. This uses both a 'vertical' scale-up approach ("institutionalization through policy, political, legal, budgetary or other health systems changes in particular to support the horizontal scale-up") and a horizontal scale-up approach ("expansion and/or replication of the intervention across the country") to support an overall sustainable scale-up process. In each country, a structure - generically referred to as the National Scale-up Steering Group (NSSG) - was planned to be developed in collaboration between the Country Research Team (CRT) and the Ministry of Health to support and eventually lead on the scale-up process. The plan was also for the CRT to work with the NSSG to identify Resource Team (RT) members to assist with the implementation for the MSI cycles' subsequent expansion as part of the scale-up. The scale-up process was designed to start with one group of three districts close to each other to implement the first MSI cycle. Following the completion of the first cycle, a second MSI cycle was planned for the same group of districts to continue the management strengthening process, whilst a second group of districts was started. In this way, the district strengthening process would be ongoing and the geographical spread of districts using the MSI cycle would increase.

At the same time, the project planned both process and outcome evaluation activities to identify lessons about the MSI and the scale-up strategy. The research questions used were:

1. How could the political and economic structures influence scale-up of the MSI?
2. How could stakeholders and relations between these stakeholders influence scale-up of the MSI?
3. How is the MSI implemented?

4. How do various factors, processes and initiatives facilitate or hinder implementation of the MSI?
5. What are the effects of the MSI on management strengthening, workforce performance and service delivery?
6. What are the costs of the MSI?
7. How do various factors, processes and initiatives facilitate or hinder implementation of the scale-up of the MSI?
8. What are the costs of the scale-up?
9. What are the outcomes/ effects of scaling up the MSI?

This report on the PERFORM2Scale programme in Uganda addresses each of these questions from on data collected during the life of the programme, as described in the Methods section that follows. The Findings section is complemented by detailed case study of the implementation of the MSI in three District Groups in Annex 1. The report concludes with a Discussion section which provides lessons of the experience of using the MSI in multiple districts and on the process of scale-up of the MSI.

Methods

Study design

The study design is a case study approach, focusing on understanding the implementation and effects of the MSI and its scale-up in the three countries (Ghana, Malawi, and Uganda). The evaluation draws upon three areas: initial context analysis, process evaluation and outcome evaluation. A combination of quantitative and qualitative data collection methods was used.

Initial Context Analysis (ICA)

The initial context analysis (ICA) was conducted between September 2017 and April 2018. The ICA was based on three data collection methods. First, CRT reflections, then a desk review, followed by in-depth key informant interviews at district and national levels.

Country Research Team reflection (CRT)

CRT reflection was the first method of data collection for the ICA. In December 2017, a group discussion was conducted with three CRT members, facilitated by consortium partners. A semi-structured CRT reflection tool was used as guidance for the discussion. The tool sought to capture views and experiences of the CRTs about factors and actors influencing the scale-up of the MSI. This was partly based on what CRTs knew from the providers' work and partly on what was going on in the country at that time. The CRT reflection took place after the inception and largely before the desk review and the interviews with other stakeholders to avoid bias during analysis.

Desk review

The desk review was conducted between September 2017 and February 2018. The document search and review were conducted by the CRT to gain insight into the political-economy context that governs the health system, and to inform the scale-up of the MSI. Various documents were reviewed. The types of documents included electronic and hard copies of reports from the government, implementing partners (IPs) and donors, with a focus on interventions similar to the MSI and/or having a scale-up component. Specifically, the documents included policy documents, implementation strategies and periodic reports, budget-related documents and relevant programme documents. The documents were analysed for relevant content and themes which were extracted and entered into a matrix using Excel. Thereafter, these were synthesised into a report.

Semi-structured interviews on context

Key informant interviews (KIIs) were conducted between January and April 2018 to provide in-depth information on the experiences of stakeholders at the national (n=3) and district levels (n=20) regarding power relations and authority around change or scale-up. At the national level, the participants included: Ministry of Health (1), Ministry of Local Government (1) and Health Service Commission (1) officials. At the district level, these included: members of the District Health Management Team (DHMT) (13), administrators (4) and political actors (3) from district group 1 (DG1). The participants were purposively selected based on their participation in PERFORM and managerial roles at various levels. An interview guide was developed at the consortium level, piloted, and adapted by the CRT. The guide included: experiences with similar interventions and scaling-up of health programmes, views on scaling-up the MSI, impressions on decision-makers and power dynamics/politics.

Analysis and synthesis of the ICA

The KIIS and CRT reflections interviews were transcribed and entered into NVivo 11 software, and coded using a standard coding framework, which was based on the interview guide. Narratives were written per theme and sub-theme, after which data from the different research methods were integrated. The documents reviewed were analysed for relevant content and themes which were extracted and entered into a matrix using Excel and synthesised into a report which was later merged with findings from the KII and CRT reflection report.

Process evaluation

The process evaluation was conducted to obtain an in-depth understanding of how the MSI and scale-up have been implemented in Uganda during the first, second and third cycles of the MSI, by whom and what factors were of influence. A combination of different methods was applied including scale-up assessment, semi-structured interviews for MSI, CRT reflections and scale-up tracking.

Scale-up assessment

The scale-up assessment was to generate insights from stakeholders involved in the scale-up of the MSI on how the scale-up operates and by what and how it is influenced. The baseline for the scale-up assessment was conducted in August 2019 while the endline assessment was done in April 2021. At the baseline, the assessment included face-to-face interviews with three RT members. During these interviews, participants scored statements about the scale-up process, and afterwards an interview took place about why they provided certain scores to certain statements. An interview guide was used during the interviews. The topics addressed in the statements were based on a literature review that identified barriers and facilitators to scale-up. These topics included: the value of MSI, the MSI capacity of the DHMTs, the scale-up strategy, the resources, partnerships, champions, the NSSG and RT, leadership and political will, and the monitoring of the scale-up process. Interviews took approximately one and a half-hour.

The endline data collection for scale-up assessment was done virtually due to the COVID-19 pandemic and travel restrictions (KIT team) as well as restrictions on face-to-face interviews. An interview guide was used to conduct interviews, and two participants (one RT and the Focal Person for the NSSG) were interviewed. The process used in the baseline assessment was repeated. The tool captured a range of topics similar to those covered in the baseline. Participants provided written consent before participating in the interviews and interviews were held at a convenient time, with the assistance of the CRT. The interviews were conducted in English and recorded.

Semi-structured interviews on MSI

During round one of the process evaluation (baseline), semi-structured interviews were conducted in August 2019, with ten (10) DHMT members from DG1. The aim was to explore DHMTs' perceptions and experiences of the implementation of the MSI, including any barriers and facilitators. An interview guide was used to guide the interviews which included; 1) their experiences of problem identification and analysis, strategy selection, plan development, implementation of the plan, reflection on the process and changes, and 2) the effects of the MSI cycle. Participants were purposefully sampled based on their engagement with the MSI implementation. Interviews took place with three members per district and included the District Health Officer (DHO) and two additional DHMT members who had been involved in PERFORM2Scale. Interviews took

approximately one and a half to two hours. The interviews were planned for and organised by the CRT and conducted by the KIT team.

During round 2 (endline) of the process evaluation, the interviews were conducted in April 2021 in DG 1 and DG 2. A total of 16 interviews were conducted with 15 DHMT members and 1 HR officer. The interviews were done virtually due to COVID-19 restrictions on travel (KIT team) and restrictions on face-to-face interviews. Participants were purposefully sampled based on their engagement with the MSI implementation. All interviews were conducted in English. An interview guide was used, which included reflective questions on the different steps of the MSI cycle, factors hindering and facilitating MSI implementation, adaptations and detailed probing about the reflection process for the MSI. Interviews took approximately one and a half to two hours. The interviews were planned for and organised by the CRT and conducted by the KIT team.

Country Research Team (CRT) reflection (process evaluation)

The CRT reflection was conducted in April 2021 (endline) to capture the views and experiences of the CRT members regarding factors and actors influencing the MSI and the scale-up of the MSI. There was no CRT reflection in round 1 of the process evaluation. However, at baseline a focus group discussion was conducted with 3 members of the CRT using a guide developed by the KIT team. The interview took approximately three and a half hours and was conducted virtually.

MSI scale-up tracking

The aim of scale-up tracking was to monitor the activities and outputs involved in the implementation and scale-up of the MSI throughout the project. The PERFORM2Scale project employed an activity-based approach to estimate the total costs based on quantities and unit costs of all inputs required for the scale-up and MSI interventions. The CRT continuously collected MSI cycle and scale-up activity costs data and entered it into an integrated tracking-costing tool developed in Excel software. Data covered 6 MSI cycles starting from 2018 to 2021. Data collection was undertaken on a monthly basis describing the estimated costs that were generated by the implementation of the MSI and scale-up process. Data analysis took place at the end of every calendar year. Data were summarised using descriptive statistics (frequencies, means and percentages).

Analysis of the scale-up and MSI assessment (baseline and endline)

Interviews were transcribed verbatim and anonymised using a format developed by the CRT. Thematic analysis was performed by researchers from MAKSPH and KIT and coding of all transcripts and notes in NVivo11 software was done by the CRT at baseline, while the KIT team conducted the coding for endline. The coding framework for baseline and endline was similar - it was developed based on the interview guides and the theory of change. If new themes emerged from the data analysis, they were added to the coding framework. Based on the coding, summaries/narratives were written, including relevant quotes to support the narratives.

Outcome Evaluation

District situation analysis

District situation analyses were conducted in DG 1 (2018), DG 2 (2019) and Dg 3 (2020). The analysis was done before the start of MSI. The situation analysis aimed to support the identification of problems to be addressed in the MSI, to serve as a baseline for tracking the effects of the MSI cycle, and to provide some contextual information about the district. The data were collected using a data collection form developed by PERFORM2Scale and extraction of data from routine Health Management Information System (HMIS). Furthermore, human resources reports and district-level reports were collated for each study district. These included areas such as staffing data, DHMT membership and functioning, district planning and financing, information systems, priority health issues, medicine and supplies, and HR programmes.

Management competency survey

The management competencies of the DHMTs were measured at baseline (October 2018) and endline (February 2021) in DG1. The survey aimed to measure the effects of the MSI on district health managers' management competencies. The study population comprised of all DHMT members. At baseline, 17 DHMT members participated in the survey while at endline 16 participated. Data were collected using a self-administered questionnaire. The questionnaire collected data relating to six aspects of district health management, namely; 1) the district health managers' socio-demographic information, 2) their previous management experience and training; 3) available management support systems; 4) general management and leadership competencies, 5) specific health system management and leadership competencies, and 6) their perception of being part of a DHMT. The questionnaire was distributed by the CRT, which also collected the completed questionnaires one week after the date of distribution.

Data from the questionnaires were entered into CSPro Version 7.4 and transferred to STATA v.15 (Stata 15; Stata Corp LP, College Station, TX, USA) for analysis. Descriptive statistics including frequencies, means, standard deviation, range and proportions were used to summarise the data. All analyses were stratified by district. Comparisons between the baseline and endline were conducted to assess for the effect of the MSI on district health managers' management competencies.

Decision space assessment

A decision space assessment was conducted in DG 2 in 2019 and repeated in March 2021 (endline). The aim was to explore DHMTs' decision space for human resource management and how this changed following MSI implementation for baseline and endline respectively. During the baseline, 11 DHMT members participated in the assessment (4 from each of districts 1 and 2) and 3 from district 3) while at the endline, 12 DHMTs participated (4 from district 1, 3 from district 2 and 5 from district 3), of which 3 were HR officers. The research team had intended to interview the same participants for both the baseline and endline, however, there were some changes in staff composition because of factors beyond the control of the project. The same process as in the baseline assessment was repeated.

Data were collected using a self-assessment questionnaire and Focus Group Discussions (FGDs). The self-assessment part of the tool assessed for perceived decision space of DHMTs in human resource management, where the members discussed and reached consensus about their perceived authority. Then the CRT facilitated a focus group discussion with the DHMT members to explore

their actual practice in human resource management and explanations for their responses in the questionnaire. The FGD took approximately 90 minutes.

Data analysis

Self-assessment questionnaire data were analysed by summing up the scores of each district. Analysis of the FGDs was guided by a framework developed by the research team and deductively extracted from the topic guides used in the FGDs. The framework is comprised of six domains: HRH policy; HRH planning, recruiting and deployment; HRH financing; performance management and supervision; continuing education/in-service training; and HRH information. These domains were adapted from a tool used to assess the decentralisation of health services in Africa and also used during the PERFORM project. Each domain included a number of HRM functions that were specifically used to explore the DHMTs' decision space and the level of control they have over each function. A thematic analysis for each district was conducted using NVivo qualitative data analysis software. Within each domain/high-level code, functions/themes were identified, and text relevant to any of these functions was highlighted and coded. This was used to generate insights about the level of control that the DHMTs had over HRM functions and how they used them, and finally to compare the findings across the three districts.

Human resource strategies survey

The human resource strategies survey was conducted in 2018 (baseline) and 2021 (endline) in DG 1. The aim was to track the effects of the human resource and health system strategies implemented in the MSI from a health worker perspective. At baseline and endline respectively, 528 and 572 health workers were surveyed. Data were collected using a self-administered questionnaire. The tool was distributed by the CRT during site visits. The questionnaire covered the following thematic areas: demographic characteristics, profession, roles, health worker commitment to the organisation, teamwork climate, supportive supervision, safety of the work environment, management practices at the health facility, district health management practices and job satisfaction. The responses were solicited using a five-point Likert scale (1-Strongly disagree, 2-Disagree, 3-Neither disagree nor agree, 4-Agree and 5-Strongly agree). Items were a mixture of those that are positively worded and negatively worded. Negatively worded items were reverse-coded during data analysis.

Data were entered using CSPro version 7.4 and exported and analysed in STATA Version 15 (StataCorp LP, College Station, Texas). Descriptive statistics, mainly frequencies, percentages, means, and standard deviation, were generated. Chi-square tests and analysis of variance (ANOVA) were used to test for differences between participant characteristics and district. Effect size analysis was conducted to characterise the magnitude or difference between health workers perceptions in the baseline and endline. To compare the baseline and endline scores, a propensity score was used to match the health workers in the baseline to a similar health worker in the endline using the nearest neighbour approach.

Costing scale-up tracking

The aim of scale-up tracking was to monitor the activities and outputs involved in the scale-up of the MSI throughout the project. The PERFORM2Scale project employed an activity-based approach to estimate the total costs based on quantities and unit costs of all inputs required for the scale-up (personnel, transport, materials and supplies, and rental of workshop sites). The CRT continuously collected scale-up activity costs data and entered them into an integrated tracking-costing tool

developed in Excel software. Data covered the period from 2018 to 2021. Data collection was undertaken on a monthly basis describing the estimated costs that were generated by scale-up process. Data analysis took place at the end of every calendar year. Data were summarised using descriptive statistics (frequencies, means and percentages).

Table 1 Summary table of methods

		Sample size		
Phase	**Method**	**Baseline (Project yr 2)**	**Endline (Project yr 4)**	**Total**
Initial context analysis	1. Document review	N/A	N/A	
	2. CRT reflection	3	N/A	3
	3. Semi structured interviews on context	23	N/A	23
Process evaluation	1. Scale-up tracking	N/A	N/A	
	2. Scale-up assessment	3	2	5
	3. CRT reflection	-	3	3
	4. Semi structured interviews on MSI	9	16	25
	5. Semi structured interviews with additional stakeholders	0	0	0
Outcome evaluation	1. District situation analysis	3 (districts)	6 (districts)	9 (districts)
	2. Management competency survey	17	16	33
	3. Decision space assessment	11	13	24
	4. HR strategies survey	528	572	1100
	5. Costing scale-up tracking	N/A	N/A	

Limitations of the methods

1. The study design envisaged collecting data from the same respondents for both the baseline and endline survey of management competency. However, due to transfers and other circumstances this was not possible.
2. Recall bias was present in several tools, such as decision space and process evaluation tools. The semi-structured interviews on MSI, for example, probed questions relating to MSI cycle 1 yet the districts had started MSI cycle 2, and the decision space tool probed for changes in perceived decision space.
3. The study sought to collect health workers' perceptions about management at the health facility and district levels. Only the DHT and a few selected DHMTs were directly involved in the MSI activities. Additionally, the study envisaged the tool would be self-administered but, in most instances, they were interviewer administered.
4. The costing data were only limited to the MSI implementation cost to CRTs and not DHMTs' activity implementation costs.
5. The endline data collection for the process and outcome evaluation was done virtually. As a result, the research team may have missed the advantages/benefits of face-to-face interviews, such as facial expressions. However, we do not believe this significantly impacted the findings of the study.

Findings

This section is structured by the PERFORM2Scale research questions.

1.How could the political and economic structures influence scale-up of the MSI?

At the time the PERFORM2Scale programme was planned [2], health was not a high priority for the government, with under 10% of the budget spent on health. However, through reforms some efficiency gains had been achieved by greater use of lower-level health facilities and a reduction in the use of higher-tier hospital services. The focus on district-level management would therefore have been increased to support this move. An important area of management that needed to be strengthened was that of the health workforce. Key problems related to staff shortages in the public sector (about 34% of the facility-based health workers in the country is working in the private not-for-profit sector). The problem of staff vacancies is compounded by high levels of staff absence.

The Ministry of Health (MoH) was highlighted by the respondents as a critical power centre at national level, as districts depend on the central MoH for funding allocations. Other resources for the districts come from the Ministry of Finance, Planning and Economic Development, donors, implementing partners and locally-raised revenues presided over by the district councils. At the district level the technical wing is under the leadership of the Chief Administrative Officer (CAO), and the District Health Officer (DHO) falls under this wing. There is also the technical planning committee (TPC) which determines the priorities for planning and works with the political wing under the Local Council V chairperson. The CAO was considered to have wide influence over all the district departments and therefore engaging with him or her on new projects is important to ensure support of the proposed ideas and help coordination with the other departments. In addition, the Resident District Representatives (RDCs), who are presidential advisors and ambassadors in the interest of the ruling party, are important power centres at district level.

Donors play a big role in the MoH budget financing and direct service delivery in different ways. Development partners are commonly found to be supporting programmes in the districts. This has two implications for PERFORM2Scale. The first is that anything perceived to be a ‘project’ is expected to bring implementation funds for any workplans developed. This was a problem faced by the PERFORM project – at least at the beginning. Second is what is referred to as the ‘allowance culture’, where there is a commonly held view amongst government officials that in order to do anything beyond their daily routine they must be rewarded. While allowances to attend workshops and meetings could be paid by PERFORM2Scale for the duration of the programme, this creates a challenge for sustaining and scaling up the programme.

The MSI relies on teamwork at the district level. It was not thought that there would be problems with cultural and ethnic differences between team members, but it was felt that it would be important to ensure a gender-sensitive approach during the implementation and scale-up of the MSI, as in general very few women hold leadership positions.

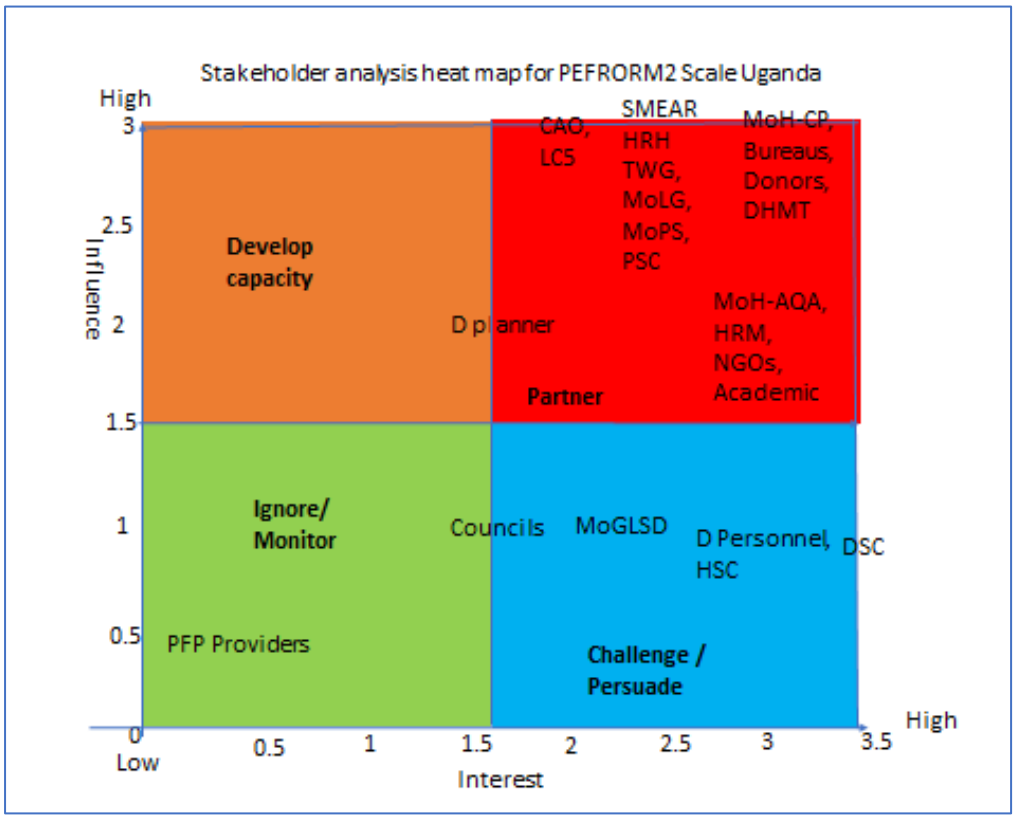
2.How could stakeholders and relations between these stakeholders influence scale-up of the MSI?

A consultation was carried out with people involved in the PERFORM project which had finished in 2015. They still remembered it clearly as an effective programme for enabling the management teams to solve workforce performance and other problems locally, which improved service delivery and helped them to become better managers. The approach to developing teamwork and collective responsibility was also valued.

The approach to problem solving was not new to many managers as this had been promoted by other initiatives, including the use of bottleneck analysis in UNICEF-funded programmes.

In 2017, an initial stakeholder mapping and analysis was carried out to identify and measure the influence/interest of each on the scale-up of the MSI (Figure 1). Subsequently, a stakeholder map was continuously updated, new stakeholders were included as they were identified , and the interests and influence of earlier identified stakeholders were revised during the course of the implementation.

Figure 1: Stakeholder heat map



Key for heat
Red - Hot
Orange - Medium
Blue - undefined
Green - cold

The priority stakeholders who could 'partner' with PERFORM2Scale included the MoH, and in particular the commissioner of planning, the assistant commissioner of Quality Assurance (who has been the DHO in Luwero during PERFORM), the HRH department and the HRH TWG; plus the Supervision, Monitoring, Evaluation and Research TWG (SMEAR). Other government 'partners' included the ministries of local government and public service. Other stakeholders classed as 'partners' included actors at the district level, including the CAO, the local councillors (LC5) and the DHMTs. The district planner was seen as mostly a 'partner' but would need some capacity development. Non-government 'partners' included the Bureaus of the Faith-based Organisations, NGOs working in the health field and academics. Stakeholders who might need persuading included the Ministry of Gender, Labour and Social Development, the Health Service Commission, the District

Service Commission and the professional councils. It was felt safe to ignore the private-for-profit providers for the MSI intervention.

The users (or beneficiaries) of the intervention were considered to be the Directorate of Health Services in the MoH and the Ministry of Local Government (MoLG), as these are the main employers of the DHMTs and their staff.

The temporary structure identified in the PERFORM2Scale scale-up framework to represent the 'user' organisations was the NSSG. Members of the MoH's Planning and Quality Assurance departments were identified as forming the NSSG, along with members of the FBO bureaus which collectively represent a large number of health facilities in Uganda.

Also, findings from the ICA report highlight important considerations for scale-up of the MSI. Based on the benefits experienced from the pilot MSI during PERFORM, respondents generally supported the idea of scaling up the intervention. It was said to be important that those involved had a thorough understanding of the target area and the involvement and continuous engagement of key stakeholders. Lessons from UNICEF's experience of scaling up innovations include the need to use existing government structures. USAID has also been instrumental in scale-up processes, and stressed the importance of partnerships with stakeholders, including government units, districts, NGOs, and implementing partners. They suggested using people who had been involved in early implementation to help with the scale-up:

> *"The very staff that had the experience in implementation were part of the implementers at the scale-up sites."* (CA_UG_D1_DHMT-7_M).

Several respondents said that the scale-up and sustainability of an intervention needed sufficient financial resources. UNICEF was reported to have "massive resources" available to scale-up and institutionalise elements of the CODES project which had started in nine districts.

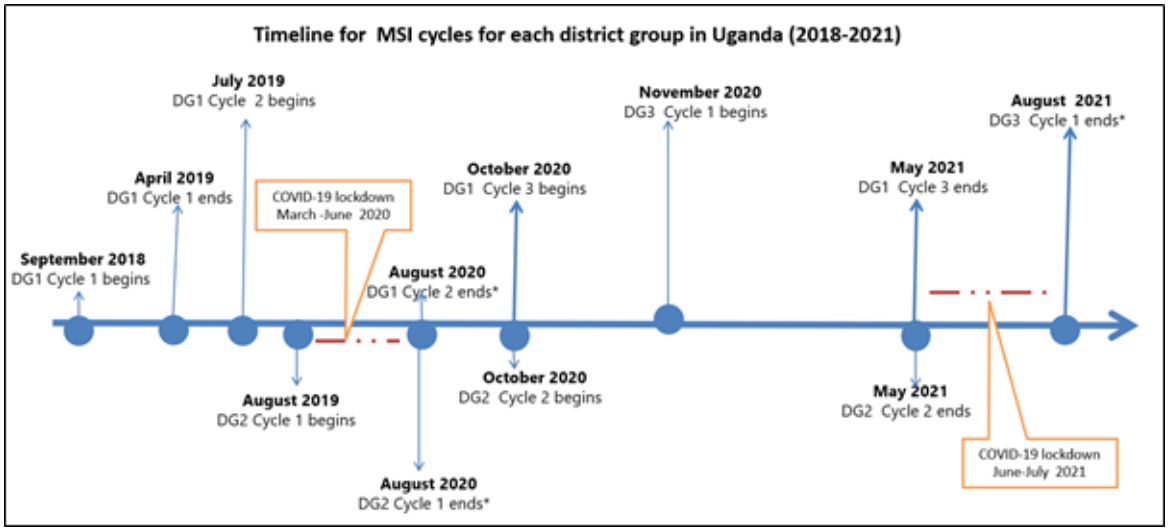
If the scale-up is by district, the scale-up plan might by affected by "district splitting", which involved dividing districts into smaller entities which would need new DHMTs to manage the health programmes.

Working at district level, it was pointed out that the political leaders, including the LC5 chairperson, needed to be involved to ensure support for the workplans developed as part of the MSIs.

3. How is the MSI implemented?

The MSI was implemented in nine districts, three of which represent the Central (DG1), Rwenzori (DG 2) and Eastern (DG3) regions. The district groupings were added in a phased manner. DG1 has completed three cycles, while DGs 2 and 3 have completed two and one cycle, respectively. The MSI was first implemented in DG1 in May 2018, followed by cycle 2 and cycle 3 in 2019 and 2020, respectively. Cycle 1 implementation began in DG2 in 2019, and cycle 2 began in 2020. Cycle 1 implementation began in DG3 in 2020 (Figure 2). There were two delays of several months, each due to the lockdown caused by the COVID-19 pandemic.

Figure 2: MSI implementation timelines



The MSI was implemented following 11 steps from the PERFORM2Scale toolkit, which are outlined in the box below:

1. CRT made a pre-visit to the chosen district(s) to introduce the initiative and get buy-in from the district health team (Adaptation by CRT).
2. Following the pre-visit, the CRT and DHT organised a one-day orientation visit in each district to introduce the PERFORM2Scale MSI and tools for data collection for situation analysis to the District Health Team and wider stakeholders (extended DHMT, political and administrative wing).
3. To inform workshop 1, the district conducted a situation analysis and also retrieved HMIS data. It took four weeks to finish/complete the situation analysis.
4. The CRT conducted a support visit during this stage of data collection and problem identification to support the district in this process and also plan and organise the first MSI workshop 1.
5. Workshop 1, facilitated by the CRT and RTs, focused on identifying problems, conducting root cause analysis, and prioritising workforce performance and service delivery problems based on data from a situation analysis. The workshop lasted three days.
6. From workshop one, the CRT supported the district in refining, revising and finalizing the problem that was prioritised, as well as planning for workshop two.
7. Workshop 2 was held to present the final prioritised problem, and to develop feasible strategies and appropriate work plans within their resource constraints. The workshop took 2.5 days.
8. Following the workshop, the CRT/RT supported the district in disseminating the workplans widely and gaining buy-in from wider stakeholders (this was a CRT adaptation).
9. Next, the workplans were implemented for 8 months (32 weeks).
10. During the implementation phase, the CRT and RTs supported districts at two-month and six-month intervals to monitor the process, and to document challenges and how they were overcome/navigated.
11. The CRT and RT organised joint/inter-district meetings (IDMs) to share progress on workplan execution (collective reflection and observation) and challenges as well as stimulate cross-learning.

Source: PERFORM2Scale MSI toolkit

Note: During MSIs 2 and 3, the steps (4)-(11) were repeated. Due to the COVID-19 pandemic and restrictions, the MSI cycle implementation took more than 8 months for cycles 2 and 3 in DG2 and 3 respectively and cycle 1 in DG3.

Table 2 below provides a summary of the MSI problem, objective, strategies developed and tested, and the effects of the strategies by cycle and district.

Table 2: summarises the problem that was addressed per cycle, broad objectives, and strategies for each of the participating districts

District	MSI cycle	MSI problem	Broad objective	Broad strategies	Effects of the strategies
District group 1- Central Region					
Nakaseke Ca(1)	1(2018)	MSI 1 & 2: High level of authorised and unauthorised absenteeism by health workers	To reduce the level of staff authorised and unauthorised absenteeism from duty to 10%	1. On-board all health workers in 7 health facilities into Nakaseke health service in one year 2. Ensure effective quarterly support supervision 3. Ensure effective staff performance appraisals annually 4. Improve rewards and sanctions for good and poor attendance 5. Revitalise the use of Integrated Human Resource Information System (iHRIS) for monitoring attendance on duty 6. Use of Mesa Traffic Restriction Alerts and Closures (Mtrac) to remind in-charges to monitor daily attendance	In MSI 1, as much as some of the planned activities were implemented there was no overall data on the reduction in overall staff absence available. However, DHMTs highlighted a number of local challenges, such as a lack of accommodation near the facilities and the fact that some of the in-charges were often absent, and this affected efforts to enforce attendance. [3, 4] There was a perceived improvement in attendance on duty but no quantitative evidence. Although DHMTs improved at collecting attendance data using monthly return forms, analysis of the data were tedious and not accurate, subsequently not done. Also, very little trust in the data. [4] For strategies 3-5, the DHMTs did not have substantial implementation and therefore, decided to give them up in cycle 3. [4]
	2(2019)				
	3(2020)	In financial year FY 2019/2020, 80% of health workers at HC IVs in Nakaseke district had an incomplete performance management process	To improve completeness of performance management process for health workers in HCIVs of Nakaseke district from 20% to 80% by June 2021	1. Build capacity of health managers and staff 2. Strengthen monitoring of performance management indicators 3. Strengthen fair rewards and sanctioning	Improved DHMT confidence in undertaking key stages of the MSI cycle. Strengthened reflection for learning and decision making [5]

District	MSI cycle	MSI problem	Broad objective	Broad strategies	Effects of the strategies
Luwero (2)	1(2018) 2(2019)	Tuberculosis (TB) cure rate in Luwero was at 41.1% compared to a national average of 75%	To reduce 'lost to follow up' TB cases and to improve documentation along TB care cascade in the Diagnostic Treatment Units (DTUs) in a period of one year	1. Improve tracking of 'lost to follow up' TB patients 2. Build capacity of health workers in TB care 3. Improve performance management at facility level along the TB cascade	Teamwork improved Developed an integrated supervision tool for TB tracking. [3] MSI cycle 1 TB cure rate increased from 20% to 41.1% by March 2019 (Quarter 3). [4] Improved attendance to duty resulting from payment based on the number of days worked. [4] Improved record documentation at the Diagnostic Treatment Units (DTUs). [4]
	3(2020)	In FY 2019/2020 100% of health facility in-charges in public health facilities in Luwero district had deficient HR management skills	To improve quality of performance appraisal in hospital and health centre level 4 (HCIVs) by 30th June 2021	1. Build capacity of in-charges in performance management process 2. Strengthen support supervision and monitoring at hospital and at health sub-district (HSD) level	The DHMT reported that they had reviewed the attendance files and noted that absenteeism amongst health workers had reduced. ([6] -p32) Changes in management skills, eg teamwork, problem analysis. Improved DHMT confidence in undertaking key stages of the MSI cycle. Strengthened reflection for learning and decision making. [5]
Wakiso (3)	1(2018) 2(2019)	High levels of staff absenteeism in Wakiso district	In MSI 1: Reduce health worker absenteeism rate in Wakiso district from a baseline of 35.5% to less than 10%. In MSI 2: Reduce health worker	1. Strengthen performance management systems 2. Strengthen internal and external support supervision at all levels 3. Strengthen use and availability of HRH data	In the first MSI cycle (2018), DHMTs noted there was still learning and subsequently decided to address the same problem in MSI 2. [7] However, some effects of MSI 1 were observed, as summarised below: There was an improvement in attitude towards attendance and actual attendance on duty by health workers in health centres where the MSI was piloted. [4]

District	MSI cycle	MSI problem	Broad objective	Broad strategies	Effects of the strategies
			absenteeism rate in Wakiso district from a baseline of 23.6% in 2018 to 5% by end of 2019		In MSI 2: The DHMTs were unable to report any data on the actual reduction in absenteeism., although it was perceived to have been reduced. [4]
	3(2020)	During the FY 2019/2020 performance appraisal assessment in Wakiso district, 32.5% of health workers at HC-IV level had poor quality plans	To reduce the proportion of health workers with poor quality performance plans from 59.2% to less than 10% by July 2021	1. Build capacity of DHMT members and health workers 2. Strengthen human resource performance monitoring 3. Set up reminder system for quarterly HR reviews and annual performance appraisal	In MSI 3, the district noted the following effects: • Improved DHMT monitoring for HRH performance - collaboration between DHMT and HR officer. • Improved understanding about factors affecting individual health workforce performance - sense of direction, health system-related factors, motivation and rewards. • Improved skills in development of key performance management tools, eg schedules of duty, performance plans. Improved DHMT confidence in undertaking key stages of the MSI cycle. Strengthened reflection for learning and decision-making. [5]
District Group 2- South-Western/ Rwenzori region					
Kabarole (1)	1(2019)	Fresh stillbirth (FSB) rate in Kabarole district was high for the last three qtrs. (FY 2018/2019) averaging at 17.7 per 1,000 births	To reduced FSB rate in Kabarole district from 17.7/1,000 births to 12/1,000 live births by March 2020	1. Increase antenatal care (ANC) attendance for timely identification of at-risk mothers 2. Reduce labour complications by providing emergency obstetric care based on early detection of complications	Marked improvement in coordination with various stakeholders in the district. Also, the HR committee formulated and is functional - this enabled analysis of staffing gaps which supported lobbying of vacant posts. [4]

District	MSI cycle	MSI problem	Broad objective	Broad strategies	Effects of the strategies
		compared to the WHO standard of 5 stillbirths per 1000 births.			Reduction in FSB rate down to 12.6/1000 (IDM 2020) reported. However, DHMTs noted that this cannot be entirely attributed to the MSI workplan. [4]
	2(2020)	70% of health workers in Kabarole district did not have performance plans in FY 2019/2020.	To improve performance planning of all health workers in Kabarole district by June 2021	1. Build capacity of DHT members and health workers at the facility level in performance planning 2. Strengthen monitoring of HR indicators at all levels	Due to COVID-19 disruptions, no effects on improving health workforce performance have been documented. ([5], p133) The MSI process enabled them to better focus on the actual problem of performance planning rather than the broad problem of performance management. ([5], p133 & [8], p17) Also, they noted they are more confident in their ability to cause change by owning the workplan. ([8], p17)
Bunyangabu (2)	1(2019)	Low fourth ANC assessment coverage of 43% in the last three quarters (FY 2018/19) in Bunyangabu district against the national target of 65%	Increasing ANC 4 coverage from 43% to 65% by June 2020	1. Increase community support services 2. Improve monitoring and support supervision 3. Improve health facility functions 4. Improve DHT coordination and support	In MSI 1, the district observed the following effects [4]: • A community dialogue plan had been developed with tailored messages for ANC. • Baylor Uganda received a proposal for lobbying funds, which were used to functionalise HUMCs. • Four community dialogue meetings were conducted to facilitate a health worker-mother relationship. • 4/12 facilities carrying out integrated outreach, and 8 facilities were mentored in carrying out integrated outreaches. • Twelve (12) facilities were mentored by the DHMT on community involvement in ANC mobilisation.

District	MSI cycle	MSI problem	Broad objective	Broad strategies	Effects of the strategies
	2 (2020)	High malaria positivity rate of 37% (July 2019 - June 2020), and 50% for the month of July 2020 in Bunyangabu district, against the national target of 7% and far above acceptable district level of 11% (district target) leading to high morbidity and mortality in the district	Reduce malaria positivity rate from 50% to 20% by June 2021	1. Increase community support services 2. Strengthen health facility functions in relation to malaria management 3. Improve DHT co-ordination and support to health facilities	There was no quantitative evidence about the extent to which the activities contributed to the decreased malaria positivity rate. However, there were a few positive effects noted. ([6], p174) • Disseminated messages to 5 health facilities and this strengthened Village Health Team (VHT) and community stakeholders' involvement in malaria prevention. • Oriented five health assistants from five different facilities. • Sensitised 30 VHTs about malaria prevention. • Held 7 radio talk shows. • Disseminated Information, Education & Communications materials for malaria prevention. • Supervised and mentored. • Developed schedules of duties for health workers in five facilities. • DHTs were oriented in malaria prevention indicators and targeted supportive supervision was conducted. • Malaria indicators are reported on a weekly basis.
Ntoroko (3)	1(2019)	An average of 17% (target = 90%) of the pregnant mothers attend ANC1 during the first trimester for	To increase the percentage of pregnant mothers attending ANC1 in first trimester from 17% to 40% by June 2020	1. Community mobilisation and sensitization 2. Strengthen capacity of health facilities to conduct community outreaches 3. Strengthen staff daily attendance to duty and attitude	In MSI 1, the district observed the following effects. seven health facilities were able to implement outreaches, and this contributed to ANC uptake. Supervision of all health facilities by both technical and political leaders. [4]

District	MSI cycle	MSI problem	Broad objective	Broad strategies	Effects of the strategies
		the past three years (2015/16 to 2017/18) in Ntoroko district			
	2(2020)	In FY 2018/2019, 61% of health workers were not appraised in Ntoroko district	To increase the percentage of health workers appraised from 37% in FY 2019/2020 to 85% by 15th June 2021 in Ntoroko district	1. Strengthen support supervision 2. Capacity building 3. Strengthen planning and coordination between HR and DHO office	Due to COVID-19 disruptions, there is no quantitative evidence about the extent to which the activities contributed to increasing the percentage of health workers appraised. However, DHMTs noted the following positive effects: The district conducted the performance management training in December 2020 and, as a result, the associated tools such as performance plans, and schedules of duties were disseminated. ([9], p.3)
District Group 3 - Eastern					
Luuka (1)	1(2020)	60% of staff in Luuka district were not appraised in the last financial year 2019/2020	To increase the percentage of health workers appraisals to 100% by June 2021 in Luuka district	1. Capacity building on performance management process 2. Strengthen monitoring of performance management process 3. Strengthen support supervision by both political and technical staff	Improved timely submission of the appraisals. Perceived improvement in quality of appraisals. [6] Note: The DHMTs had no quantitative evidence to indicate the scope of improvement.
Jinja (2)	1(2020)	In FY 2019/2020 Jinja district local government registered low percentage (67%) of fully	To increase the percentage of fully immunised children in Jinja district from 67%	1. Strengthen accessibility and availability of immunisation services at the health facility at least 5 days a week and 4 outreaches per month 2. Data driven decision making	The percentage of fully immunised children increased by 20% (67-87%) despite challenges related to COVID-19. [6, 10]

District	MSI cycle	MSI problem	Broad objective	Broad strategies	Effects of the strategies
		immunised children against the national target of 85%	to 82% by June 2021	3. Strengthen leadership and management of immunisation services delivery at all levels 4. Strengthen vaccines supplies and management	Strengthened accessibility and availability of immunisation services at health facilities at least 5 days a week and 4 outreaches per month.
Buikwe (3)	1(2020)	In FY 2019/2020 Buikwe district had a poor management system evidenced by 84% of appraisals being poor-quality	To improve the percentage of quality appraisals from 16% to 70% by June 2021	1. Build capacity of health workers at all levels in performance management process. 2. Strengthen monitoring of HR indicators at all levels Strengthen support supervision and mentorships in performance management	Timely annual appraisal (before 30th June. More health workers were appraised (during the MSI 238/257). [6, 10] More than 90% of appraisal forms bearing individual performance plans. Health workers at district and facility levels were trained in performance appraisals in the form of mentorship and coaching.

4.How do various factors, processes and initiatives facilitate or hinder implementation of the MSI?

Facilitating factors, processes and initiatives

Some factors were related to characteristics of the MSI/ MSI principles, whereas others were related to the broader context.

1. **Ownership of the problems being addressed**

One of the principles of the MSI is ownership of the problem by the DHMT (MSI tool kit). The fact that DHMT members themselves could identify the problem rather than having to work with an imposed topic was highly appreciated and seen as creating ownership. As a result, DHMTs were able to commit and follow through on the rest of the steps of the MSI cycle, including the development of feasible strategies. [11]

> *"It was too good […] Many projects come here and they simply say they are going to do this, you do not know how it has come about, how you arrive at that problem, so this one [PERFORM2Scale] created ownership […] we were given chance to put down five problems and again choose which ones we feel are more pressing. Such things don't normally happen […]" (DHMT_01_02)*

2. **No additional resources provided by PERFORM2Scale**

The lack of additional resources accompanying PERFORM2Scale was often referred to as a positive factor by various DHMTs, as it challenged DHMTs to make more efficient use of existing resources. In PE-01, for example, several participants said that PERFORM2Scale has led to a change of mindset, particularly about the possibility of being able to do something despite resource constraints.

> *"[…] It was a wake-up call for some of us. It helps you to think outside the box. We used to do certain things differently […] before, when a project came, we would get funding to implement. At first, we were like 'why don't they just give us funds, why are they telling us [to use existing funds], why can't they just give us funds' […] PERFORM2scale, they bring us together to reflect more […]" (DHMT_03_03)*

In Process Evaluation 2, the DHMTs further discussed several processes that took place to facilitate the implementation of their work plans. [12] These included:

- Integration into the district budget/Primary Health Care fund (PHC) and
- Lobbying resources and integration into partner-funded activities.

For example, the strategies related to routine management functions, such as support supervision, monitoring etc, were easier to integrate within existing district budgets. Notably, integration into district budgets was also enabled by teamwork among the core MSI team and engagement of other stakeholders that controlled the vote, namely the CAO, and proper planning and coordination on the part of the DHMTs. Furthermore, to implement some strategies, the DHMT members also explained that they lobbied for additional resources or integrated their MSI activities with those funded by implementing partners working in their districts.

> *"[…] So, if I have an activity with an implementing partner (IP), then you say you have these things that need to be delivered (on MSI work plan) […] so I go with the IP, I do what I am supposed to do but I also find time and also do MSI activities." (DHMT_01_02)*

3. Tools provided by PERFORM2Scale

PERFORM2Scale provided various tools to the DHMTS which facilitated various stages of the MSI. For example, the data collection tools provided by PERFORM2Scale enabled the DHMT to use the existing data and to collect health service delivery and workforce performance data. This enabled them to identify the problems based on the situation on the ground. Another tool was the prioritisation matrix, which enabled DHMTs to prioritise which human resources and/or health system service delivery problems to address according to time, cost, decision space, and effect envisaged. [11, 12]

> *"[…] so, we came up with a list of problems or challenges and one of them was the high rate of absenteeism and there were also others like supportive supervision […]. But we said no, we are not going to handle all these problems at a go […] so we had to go into the problem prioritisation process as a team, we had to go into voting and ranked and gave each weight and so we came up with high rate of absenteeism of health workers from duty as the biggest challenge […]" (DHMT_01_01)*

Other tools included templates for workplan and strategy development as well as reflection diaries. For example, many participants in PE-01 mentioned that the DHMTs were given templates that would guide them with the work plan structure. During the process of developing work plans, DHMTs included the responsible persons for leading each activity as well as allocated a time frame for implementation.

> *"[…] the work plan is not the usual column one that we always do in the financial year. This were broad objective, strategy, then we look at activities, then we would look at expected change, indicator what will show, then we looked at the gender how does it link, then the responsible persons like that" (DHMT_02)*

The DHMTs also indicated that the diary was an important tool for reflection and documentation of team activities, processes and outputs.

> *"The reflection was being done first of all; before you do it as a team it is at an individual level by looking at what you have been able to do […] whether it has really helped you to achieve what you intended to achieve or not and such we would look into the process and not just the output." (DHMT, 03_04)*

4. Facilitation skills by CRT/ RT

DHMT members stated that facilitation skills by the CRT and RT improved their skills in problem identification, prioritisation and root cause analysis, development of feasible strategies and reflection. For instance, one participant mentioned that the facilitation they received about the root cause analysis under PERFORM2Scale was detailed and provided various avenues for practising what had been learned. Another reported that PERFORM2Scale enabled the participants to conduct a root cause analysis as a team which ultimately made the problem analysis richer. [11] The "5-whys" approach to root cause analysis and the guidance from the CRT were seen as helpful during this process.

> *"Well, you know root cause analysis is really not an easy task, of course it was something that we really had to do, because we wanted to come up with those causes that are directly the root causes of absenteeism […] because you know if you come up with causes and not root causes you will be addressing these underlying issues while leaving the real problems" (DHMT_01_01)*

During the workshops, the CRT also encouraged the DHMTs to give positive criticism when providing feedback to other teams and this was also appreciated by the participants. This helped them to appreciate each other's efforts and to contribute to the improvement of the outputs of other teams without affecting their confidence. [11]

Furthermore, several participants acknowledged that PERFORM2Scale platforms, such as workshops and inter-district meetings, enabled them to interact and learn from officials at the national level (RT). For example, in one of the workshops, a document on addressing absenteeism was shared and this guided further implementation of the MSI. Another participant noted that during the meeting, the officials from the national level (particularly those from the Human Resource Department) shared documents and clarified 15 key issues where the DHMTs were uncertain.

> *"[…] they are really resourceful people. There is a senior human resource officer they usually bring from Ministry of Health, when he comes, and then you raise issues to do with human resource, he gives answers, and he even explains and explains how you can do it or handle it […]" (DHMT_02_03)*

5. Shared learning across districts

In Process Evaluation 1 and 2, several DHMTs reported that they liked the workshops and inter-district meetings (IDMs) because they provided a platform for them to have share lessons between districts. [11, 12] For example, the problem analysis workshop helped individual districts to better understand the root causes of the problems they face by exchanging experiences. Moreover, the majority of the DHMTs reported that they liked the IDMs because they allowed for the sharing of experiences in implementing certain interventions, as their chosen topics largely overlapped.

> *"There is peer-to-peer interaction. […] when I sit here, there is a DHO of DHMT_3 and DHO of DHMT_1, there are doctors from DHMT_1, we learn from each other because this one tells you how they do things and how it had worked. […] In one of the meetings I shared with them how we use number of days worked to calculate salary paid." (DHMT_02_01)*

> *"I think the inter-district meetings have provided us with the opportunity to learn from other colleagues on a number of things […]" (DG1-DHMT-003-02)*

The meetings also included sessions for provision of feedback which enabled DHMTs to identify ways of improvement without affecting their confidence.

6. Regular interaction between the CRT, RTs and DHMTs

Regular interaction between the CRT, RT and DHMTs through several types of engagement, including phone calls, emails and the MSI implementation support visits, enabled continuous reflection about the progress of MSI implementation, identification of potential changes to be made, and ways forward as the teams documented processes.

Hindering factors, processes and initiatives

Factors hindering implementation of the MSI included challenges related to characteristics of the MSI as well as contextual factors. These are detailed below.

1. Problem identification and analysis remains challenging

Problem identification and problem analysis are the first steps of the MSI (MSI toolkit). However, despite acknowledging the skills learnt, DHMTs noted that the process of problem identification and analysis was quite challenging, mainly due to team dynamics among DHMTs that hindered reaching consensus. The differences in academic backgrounds and specialities amongst the core MSI teams led to diversity in perception and interpretation. [11, 12]

> *"[…] For MSI 2, there was an argument […] HR was looking at performance planning as part of performance management, hence their desire to take on the whole process while the other members wanted to focus on some elements within performance management which were characterised with poor indicators." DG1- DHMT- 003-03*

Furthermore, many participants thought that the root cause analysis was sometimes challenging because they were unable to do a deeper analysis, and thereby unable to identify the actual root causes of the problem and interlinkages between causes. [11]

2. Reflection

Reflection is a core aspect of the MSI and remains challenging for DHMTs, despite the realisation that reflection is important. [11, 12] Challenges included inconsistent use of diaries, geographically dispersed members, limited capacity of individual members to practice and continuously document in reflective diaries, and inability to reflect on what was documented.

> *"[…] whereas you have quite a number of members within the implementation team, not all of them are conversant with or are part of the practice to use reflective diaries." DG1-DHMT-003-02*

> *"The biggest challenge we have with the diary is that our team is dispersed […]." (DHMT_02_01)*

3. No additional resources provided by PERFORM2Scale

Although DHMTs noted this as a positive factor, having no additional resources was perceived as breaking the status quo of partners operating at the sub-national level (district) and therefore made appreciation of the MSI difficult and affected the extent of implementation. [12]

> *"I have worked in the district for many years and for sure all projects that come have funds, although some have stringent expenditure guidelines […] and vehicles. But because this project [PERFORM2Scale] didn't have that, somehow, even if you wanted to implement, you are kind of limited." DG1-DHMT-001-02*

> *"Whenever you talked about no monies being given, the atmosphere would change. […] if you say no resources at all, I think you are being unrealistic […] because the districts are […] really limping […]. CRT Reflections*

In addition, the innovation by DHMTs, such as lobbying other partners for resources and integration of activities within existing partner-funded projects, also had limitations. For example, the

integration of MSI activities into other partner-funded projects affected the depth and quality of MSI related activities.

> *"We reached an extent where we cannot integrate 100%. [...] at times we move out with a partner, and when a partner sees maybe you have gone for malaria audit, and after the audit, the work is too much and you cannot now do MSI work." (DG1-DHMT-001-02)*

4. Election period in Uganda

The DHMTs reported that the national election period (January 2021) affected implementation of MSI activities in varying ways across districts. [12] For example, district 2 in DG2 reported difficulties in relation to influencing the engagement of political leaders in MSI, yet this is a critical component that buffers the limited decision space of the DHMT in relation to the approval of funds for activities.

> *"[…] you would want to bring an influential person on board, but the person is nowhere to be seen because he is looking for votes." DG2-DHMT-002-01*

5. Staff Transfers (staff turnover)

Staff transfers were experienced in DG1 and DG2. For example, in district 1 of DG1, an in-charge of a health facility was transferred to the district hospital in cycle 3, and one of the core MSI team members was transferred from district 2 to district 3 of DG1. Finally, district 2 of DG2 experienced a transfer of their human resource (HR) officers to another district, and the private sector. However, the impact of the staff transfers on the implementation of the MSI was perceived as minimal. This was because the DHMTs implemented effective coping strategies such as orientation of new members who immediately embraced the MSI. Additionally, it also included members who were already part of the extended DHMT and had participated during support visits.

> *"We experienced transfer of one staff who was part of the core team, at the health sub-district to another facility […] we had to replace him with another person who is now the in-charge […] it was easy to bring him on board […] much of the things we were discussing […] were really part of what he was going to do at his level." DG1-DHMT-001-01*

COVID 19 pandemic and how it affected MSI implementation

COVID-19 affected the implementation of MSI cycles 2 and 3 for DG1 and MSI cycles 1 and 2 for DG2 in various ways, and delayed the start of the MSI in DG3 (Figure 2). This included the inability to conduct meetings (among DHMTs and between DHMTs and the CRT) and the frustration/ halting of implementation.

1. Irregular meetings/ interactions

Across all districts, DHMTs reported that it became more difficult to conduct intra-team meetings due to the COVID-19 lockdown and standard operating procedures (SOPs) around social distancing. Unique to district 3 of DG1, fear of contracting COVID-19 was perceived as another factor that prohibited some members from attending meetings. Although, in the latter phases of the lockdown, meetings resumed, with strict adherence to SOPs, the inability to attend or organise meetings affected the sharing of information on activities conducted and reflection for the core MSI project team.

"Most of us were locked in our offices because we were fearing to interact with others. We thought, if this person comes to my office and they have COVID-19, because they, especially health workers are dealing with sick people. So, we were social distancing and therefore unable to meet." DG1-DHMT-003-03

Additionally, meetings/contact between DHMTs in the same district group and the CRT, namely inter-district meetings and support supervision visits respectively, were halted during the lockdown, yet constant engagement was perceived to have a high impact on collective reflection, peer-to-peer learning, and knowledge transfer.

"We couldn't [have a meeting to] share with other districts on how we could improve some of the services because of presidential directives on not having gatherings." DG2-DHMT-002-03

2. Little or no implementation

Due to the COVID-19 lockdown, the DHMTs in all districts reported having either been frustrated or halted implementation of MSI activities. In addition, implementation was affected by the diversion of funds and attention to COVID-related activities such as active surveillance.

"It was a really tight situation […] hard to implement what we had planned for because some of the planned activities involved moving to the field to conduct support supervision, which we couldn't do because of lockdown." DG1-DHMT-003-03

5.What are the effects of the MSI on management strengthening, workforce performance and service delivery?

The effects of the MSI on management strengthening, workforce performance, and service delivery were assessed using a number of tools, including a HR strategies tool for health workers, decision space tool, DHMT interviews and a management competencies survey.

Column 6 of table 2 (section 3) highlights effects arising from the implementation of MSI activities on the selected problems for all participating districts across all cycles. Two case studies - Wakiso (district 3 of DG1- cycle 3), and Jinja (district 2 of DG3 – cycle 1) have been selected to show the complete process from problem identification through implementation and finally the effects of implementation.

Case study 1: Wakiso district MSI cycle 3

The Wakiso DHMT started cycle 1 in 2018. They focused on addressing the high level of unauthorised absenteeism by improving the use of HR information systems, rewarding good attendance, improving supervision and management. By the end of the cycle, (2018), DHMTs noted there was still learning needed and subsequently decided to address the same problem in MSI cycle 2. [7]

Cycle 2 had two broad strategies, namely: 1) strengthen the performance management systems and 2) strengthen internal and external support supervision at all levels informed by the lessons from the first MSI cycle. Activities included training in performance management for in-charges in 40 health facilities and induction for 107 new recruits. Although it was perceived to have been reduced, the DHMTs were unable to report any data on the actual reduction in absenteeism. [3]

In cycle 3, the DHMT changed to a new problem - the poor quality of health worker performance plans. This problem was addressed through training and support for the Health Centre IV (HCIV) facility managers and supported with the provision of performance management tools, support supervision setting up a reminder system for quarterly HR reviews, and annual performance appraisal. It was reported that in one HCIV there is now more ownership of performance management. Effects observed included 1) improved DHMT monitoring for HRH performance through collaboration between the DHMT and HR officer, 2) improved understanding about factors affecting individual health workforce performance through creating a sense of direction, health system-related factors, motivation and rewards, 3) improved skills in development of key performance management tools, eg schedules of duty, performance plans, 4) increased DHMT confidence in carrying out key stages of the MSI cycle, and 5) strengthened reflection for learning and decision making. [5, 6]

Case study 2: Jinja district MSI cycle 1

As a district in DG3, Jinja district conducted only one MSI cycle. [5, 6] The cycle started with a situation analysis in August 2020, when the DHMT listed five priority workforce problems to be addressed through the MSI initiative. During the problem analysis workshop (MSI Workshop 1) , the DHMT prioritised using a prioritisation matrix shared by the CRT and selected one problem, which was, “In financial year 2019/2020 Jinja district local government registered a low percentage (67%) of fully immunised children against the national target of 85%”. The DHMTs then refined the problem statement and identified root causes during workshop 1. At the workplan and strategy development workshop (MSI workshop 2), the DHMT reflected and further refined their problem statement and root causes. The revised and final problem statement was: “In FY 2019/2020, Jinja district LG registered a low percentage (67%) of fully immunised children against a national target of 95%”.

The overall objective was to increase the proportion of fully immunised children in Jinja district by 15% (67%-82%) by June 2021. The DHMTs identified four main strategies to address the problem: 1) strengthen vaccine supply and management, 2) mentorship and coaching, 3) data-driven decision making and 4) VHTs to be facilitated for mobilisation. A workplan was developed with detailed activities, indicators, and responsible persons. In November 2020, the workplan was disseminated to extended DHMTs, including district administrators, political leaders, health facility in-charges, partners, and other technical people to secure buy-in. Furthermore, the DHMTs noted that they received feedback about their workplan and therefore revised and removed some activities.

By the time of the first MSI implementation support visit in March 2021, the DHMTs had implemented few activities. However, they mentioned the COVID-19 pandemic and lockdown as the major hindrances to non-implementation of some activities. During the inter-district meeting of August 2021, the DHMTs noted the following effects: 1) percentage of fully immunised children increased in financial year 2020/2021 by 20% (67-87%) despite challenges related to COVID 19, and 2) strengthened accessibility and availability of immunisation services at health facilities at least 5 days a week and 4 outreaches per month. [5]

Findings from outcome evaluation

Narratives from the qualitative interviews indicated several effects on management and workforce performance of DHMTs at district level. These included individual growth, teamwork, strengthening of routine functions of DHMTs, increased confidence and broader use of the MSI, as well as increased appreciation of the gender lens.

Individual growth: Many DHMTs noted that through their involvement in MSI workshops, management skills such as problem identification and analysis, and strategy development were imparted. They further noted they felt more confident to transferring such knowledge and skills to their technical areas of work and even supporting their colleagues and lower-level managers.

Teamwork: DHMTs reported to have observed improved teamwork around MSI stages as well as planning and implementation of routine activities. This was in contrast to their previous involvement in the MSI activities. Involvement in MSI also led to improved relationships and coordination among the DHT members and between health sub-district managers and the DHT.

Strengthening of routine functions of DHMTs: The MSI strengthened routine management functions such as support supervision, rewards and sanctions, DHT meetings, among others. Before the MSI, such functions were reported to have been weak.

Effects on service delivery: As a result of strengthening routine management functions indicated above, there was an indirect effect on service delivery (Outcome evaluation 2021). However, some districts that addressed service delivery problems with a HR lens saw improvements in indicators related to service delivery, for example, the TB cure rate in Luwero, ANC 4 attendance in Bunyangabu, and an increase in the percentage of children fully immunised. [6]

Confidence related to broader use of the MSI: The DHMTs reported a cumulative increment in confidence to apply MSI principles by the third MSI cycle. They further indicated confidence to apply the MSI principles to other areas or problems within the health sector. [12] During the DG1 inter-district meeting, a participant from Wakiso (district 3) reported that they had applied the same principles to address issues in the education department. [13]

Gender: Through their engagement in MSI there was increased appreciation about the gender lens approach to planning among DHMTs. This was because the CRT continually urged them to sufficiently think about gender needs and plan accordingly.

Findings from the decision space assessment

A baseline and endline decision assessment were carried out in DG2 to measure the perceived and actual decision space of DHMTs in relation to human resource management (HRM) processes. Findings from the decision space assessment showed DHMTs' awareness of their decision space increased due to their involvement in the MSI.

Analysing decision space, as reported by the DHMTs, provided a real-world view of the degree of decentralisation regarding HRM functions in the health sector at district level in Uganda.[14] It helped explore the reported decision-making powers transferred from the central to local government and how DHMTs use this power to improve workforce performance. It also provided an opportunity to measure changes in the DHMTs' use of HRM decision space following the implementation of the PERFORM2Scale intervention in each district during the endline study and identify areas where the DHMTs can change or improve their actions. There was slight improvement in the use of decision space available to the DHMTs after the implementation of the MSI, with the three DHMTs reported varying levels of control over HRM functions, ranging from 'none' to 'full', with Bunyangabu and Ntoroko DHMTs showing a wider decision space than their peers in Kabarole in both the baseline and endline studies.

The implementation of the MSI helped strengthen HRM at the district level by supporting the DHMTs to become more confident in using their available decision space along with their management skills while building their competencies. Despite the existence of policies and

regulations, a lack of resources, bureaucracy, local politics, and skills gaps remain major challenges to the use of available decision space by the DHMTs.

Findings from the management competence survey

Baseline and endline management surveys were conducted among DHMT members in DG1. A comparison between the baseline and endline findings related to management and leadership competencies, general management, as well as specific health systems management skills and competencies are highlighted as below. [15, 16]

a. Management and leadership competencies

Study participants were asked to provide an overall rating of their management and leadership competencies. Across the three districts, there was an increase between the two rounds of the survey in the participants' ratings of their competencies as 'good' from 64.7% in the baseline to 81% in the endline. However, a decline was registered in the rating of their competencies as 'excellent' from 11.8% to 6%.

Overall, the male participants' ratings of their competencies as 'fair' and 'good' increased from 83% in the baseline to 100% in the endline, while for the females the rating changed from 20% 'fair' in the baseline to 20% 'excellent' in endline. The highest increase among males who rate their competencies as 'good' (25% to 75%) is registered in Wakiso. No such differences were observed among the females in any of the districts.

b. General management and leadership competencies

Study participants were asked to assess their general management and leadership competencies, including their interpersonal skills, leadership skills, conflict handling skills, as well as time planning skills. Mean scores for the scales are reported in Table 3 categorised by baseline versus endline.

Table 3: General management and leadership competencies

Competency	Baseline				Endline			
	Luwero (n=6)	Nakaseke (n=6)	Wakiso (n=5)	Total (n=17)	Luwero (n=5)	Nakaseke (n=5)	Wakiso (n=6)	Total (n=16)
Interpersonal skills	4.8	3.9	4.3	4.3	4.7	4.7	4.3	4.6
Leadership skills	4.8	4.1	4.4	4.4	4.7	4.6	4.5	4.6
Conflict-handling skills	4.3	3.3	4	3.9	4.4	4.2	4.3	4.3
Time-planning skills	4.3	3.3	3.8	3.8	4.1	3.9	4	4

Interpersonal skills: 2 items, Leadership skills: 5 items, Conflict-handling: 1 item, Time-planning skills: 3 items

- Overall, district health managers registered improvement of a range 0.2-0.4 in all domains assessed compared to the baseline: interpersonal skills (4.6 Vs 4.3), leadership skills (4.6 Vs 4.4), conflict-handling skills (4.3 Vs 3.9), time-planning skills (4.0 Vs 3.8).
- Nakaseke district health managers appeared to show great improvement in their interpersonal skills (3.9 vs 4.7), leadership skills (4.1 vs 4.6), conflict handling (3.3 vs 4.2) and time-planning skills (3.3 vs 3.9). Luwero district health managers declined in their scores for time-planning skills from 4.3 to 4.1. In Wakiso, a slight increase was recorded for the

following domains: leadership skills (4.4 vs 4.5), conflict-handling skills (4.0 vs 4.3) and time-planning skills (3.8 vs 4.0).

- Nakaseke district recorded the highest level of improvement across the three districts in their general management and leadership competencies, followed by Wakiso and Luwero, which maintained high rating scores (>4.0) for both the baseline and endline.

Specific health systems management skills and competencies

Perceptions of the district health managers concerning specific health system management skills are presented. The competencies assessed included 1) oversight and coordination (22 items), 2) human resource management (10 items), 3) resource management (4 items), 4) information management (3 items), 5) leadership skills (5 items), 6) service delivery and community involvement (3 items).

- District health managers in Luwero and Wakiso maintained high score ratings (scores above 4.0) in situational analysis, problem analysis, planning, implementation, and monitoring and reporting, while Nakaseke district demonstrated great improvement in all the above competencies, from scores below 4.0 at baseline to scores above 4.5 at endline.

- Nakaseke and Wakiso districts appeared to be more confident in human resource management in endline compared to baseline (Nakaseke: 3.7 vs 4.1, Wakiso: 4.0 vs 4.3). Luwero district, despite not showing any changes in the rating (4.5), continued to be the leading district in regard to its confidence in human resource management.

- In terms of resource management competencies, Luwero and Wakiso reported greater improvement compared to Nakaseke district (4.2 vs 4.7 Luwero, 3.6 vs 3.9 Nakaseke, and 3.9 vs 5.0 Wakiso).

- Competencies in financial management slightly declined in Luwero district (4.2 vs 3.8) but improved in both Nakaseke (3.3 vs 4.2) and Wakiso (4.0 vs 4.1).

- Nakaseke district health managers' information and service delivery competencies improved compared to the baseline scores, while Luwero and Wakiso maintained high scores.

Findings from the HR strategies survey

A health worker survey was conducted at baseline and endline to measure perceptions of health workers about management and supervision at the district level and health facility as well as other areas, including organisational commitment, teamwork, safety climate, and job satisfaction. One of the assumptions in the theory of change was that the effects of strengthening management would lead to improved health workforce performance of health workers at facilities who were not part of the core MSI/DHT implementation team. [17, 18]

Table 4 presents the results of the health workers' perception scores. Across all scales, the endline ratings were similar to the baseline ratings. Positive or improvement (albeit small) in health workers' perceptions were seen in organisational commitment, teamwork climate, and supportive supervision and management at the district level at the endline compared to the baseline. However, management at the health facility and job satisfaction indicated negative scores (small declines) implying a negative effect on these constructs.

Table 4: Perceptions of health workers survey findings

Outcome measure (Composite scale scores)	Baseline		Endline		Diff ES (eta)/Hedge's g
	N	Mean	N	Mean	
Organisational commitment	528	3.52	572	3.71	0.269
Teamwork climate	527	3.80	568	3.88	0.133
Supportive supervision	526	3.86	568	3.92	0.078
Safety climate	524	3.71	571	3.80	0.142
Management at facility	484	3.80	480	3.76	-0.038
Management at district	523	3.59	572	3.61	0.029
Job satisfaction	527	3.45	570	3.41	-0.061

Notes: "Diff" is the average difference between baseline and endline groups, "ES" is the effect size of the estimated impact. Key: Hedge's d value =0.2 (blue), 0.5 (yellow), and 0.8 (green) are considered to be small, medium, and large effect sizes.

6.What are the costs of the MSI?

This section presents analysis of costs populated on a monthly basis per calendar year. It captures information on costs incurred by the CRT for MSI activities including orientation, workshops for problem analysis and workplan development, as well as supervisory visits and inter-district meetings. Other direct costs, such as personnel transport, rental of sites, materials and supplies, are also captured. The costing information captures costs per calendar year as the MSI is rolled out to new districts: one district group with three districts (DG1) in 2018, two district groups (DG1 and 2) in 2019 and lastly three districts (DG1,2, and 3) in 2020.

The average and percentage distribution of the MSI by the five costing centres/activity are shown in Tables 5 and 6. Personnel and per diem costs accounted for the majority of costs during the MSI implementation and scale-up.

Table 5: The average cost for the six cycles of implementation in 9 districts (all costs in euros (€)

Category	Personnel costs	Per diem	Transport	Materials and supplies	Other costs	Total
MSI	28,709	22,500	11,995	467	14,731	78,403
Scale-up	3,960	249	111	62	4,270	8,653
Total	32,669	22,750	12,106	529	19,001	87,056

Personnel costs include: *Salaries for the CRT, DHMTs, and RT*
Other costs include*: Communication, rental of workshop venues, rapporteurs, expert fees for RTs and NSSG FP.*
Per diem costs cover: *Accommodation and subsistence for DHMTs, CRTs, RTs and NSSG FP*
Transport costs include*: Car hire and fuel costs by CRT, RT & DHMTs.*

Table 6: Percentage distribution of the costs per costing activity

Category	Personnel costs	Per diem	Transport	Materials and supplies	Other costs	Total
MSI %	37%	29%	15%	1%	19%	100%
Scale-up %	46%	3%	1%	1%	49%	100%
Total %	38%	26%	14%	1%	22%	100%

Personnel expenditures, including compensation for the CRT, accounted for 37% of the costs incurred during the MSI implementation, according to Table 6. It is worth noting that although they are included in the costing exercise the salaries of the DHMT, RT and NSSG are paid by the government, not the PERFORM2Scale programme. CRT and DHMT per diem expenses for lodging and subsistence for workshops and inter-district meetings accounted for 29% of total MSI costs. Transportation accounted for 15% of the total costs, while materials and supplies accounted for only 1%.

7.How is the MSI scale-up strategy implemented?

Horizontal scale-up

The MSI has been implemented in nine districts, as stated in section 3. The selection of districts was guided by the principles developed by the PERFORM2Scale consortium which included willingness to participate, three districts clustered close to each other, and not duplicating a similar MSI (PERFORM2Scale framework and strategy, Pg. 24). However, during the selection process, adaptations were made as follows.

***Selection of districts for DG1*:** DG1 was selected in 2018. DG1 was supposed to cover the three PERFORM districts at first. (PERFORM2Scale framework and strategy, Pg. 24) However, due to geographical spread across the country, the selection was reconsidered in March 2018 after consultation with the NSSG, RTs, and paired partner. Accordingly, Luwero, one of the PERFORM districts, and two neighbouring districts, Wakiso and Nakaseke, were selected to allow for easier inter-district meetings and CRT visits, as well as to facilitate cross-district learning. ([19], p41-42; [7] pp27-8, [20]).

***Selection of districts for DG2 and DG3*:** District groups 2 and 3 were enrolled in 2019 and 2020 respectively. The geographical clustering principle (as used in DG1) was used for the selection of districts for DG2 and DG3. The CRT, in consultation with the NSSG and RT, identified the districts for DG2 (Kabarole – previous PERFORM district, Bunyangabu and Ntoroko) and DG3 (Jinja – former PERFORM district, Luuka and Buikwe districts). ([3] pp18-19); [19], p41-42, [20])

The details of MSI cycles per district group are summarised in Table 7 and in Section 3 Table 2 and Figure 2.

Table 7. Horizontal scale-up - number of districts

District group	Implementation stage		#Districts		#MSI cycles	
Project Year	PY2 - 2018	PY3 - 2019	PY4 -2020	PY5 - 2021	# districts	# cycles
DG1 Luwero, Wakiso and Nakaseke	MSI1	MSI2	MSI3	MSI3 cont'd	3	3
DG2 Kabarole, Bunyangabu, Ntoroko		MSI1	MSI2	MSI2 cont'd	3	2
DG3 Jinja, Luuka, Buikwe			MSI1	MSI1 cont'd	3	1
Totals					**9**	**6**

Vertical scale-up (formation, development and operation of the NSSG)

The formation of the NSSG was influenced by four main events, namely:

a. Initial stakeholder analysis in the Liverpool workshop 2017

An initial stakeholder analysis was conducted during Consortium Workshop 1 in March 2017, where potential organisations and individuals were identified who could be part of the NSSG and wider group. ([7], p6) ([20], Stakeholder analysis 2017)

b. Engagement of the then Commissioner of QA&I

Following the consortium workshop, the CRT held a PERFORM lessons learnt workshop in May 2017. During this workshop, the Commissioner of Quality Assurance and Inspection at the MoH was invited as the former District Health Officer in Luwero district. He provided guidance on who to engage at the MoH and other government ministries, departments or agencies ([7], p8-9; [19], p30).

c. Consultation with the Director General of health services

The Commissioner of QA&I then organised an initial consultation meeting with the Director General of Health services (DG) on 27th November 2017. As a result of that meeting, the DG identified potential NSSG members and a way forward on how to continue to engage the NSSG in PERFORM2Scale work. ([7], p9).

d. Partnership commitment letter

The DG issued a partnership letter dated 25th January 2018 which stipulated the commitment of the MoH towards supporting PERFORM2Scale and providing a list of NSSG members, which included the Director General of Health Services and Commissioners from the MoH's four main departments (QA&I, Human Resource Management (HRM), Nursing and Midwifery, and Health Services/Planning). ([19], p30)

Operationalisation of the NSSG

Three meetings were organised for the NSSG on 9th March 2018, June 2018 and the annual workshop in November 2018. However, due to competing priorities at the national level, the majority of the NSSG members were unable to attend. At the national workshop, a member of the NSSG advised the CRT to a) engage officers who are lower in rank but directly report to the NSSG, and b) to engage existing structures within the MoH, such as SMEAR TWG and HRH TWG, where the NSSG are active members ([19], p31). Note that the national workshop was only held once.

Following the national workshop, the principal investigator (PI) had an informal discussion with the Commissioner of QA&I about a possible way forward regarding functionalising the NSSG. They agreed to appoint the Commissioner of QA&I as the NSSG focal person (NSSG FP). The CRT met in December 2018 to reflect on the events of the year as well as to discuss formalising the appointment of the NSSG focal person. One of the action points was to revise the Commissioners' Terms of Reference (TOR). As a result, his roles focused on guiding implementation of the MSI and scale-up, as well as updating the rest of the NSSGs regarding implementation ([19], p31). Accordingly, the CRT started engaging the focal person on a regular basis, making presentations and providing updates to the SMEAR and HRH TWGS. See table 8 for the establishment and operation of the NSSG over the programme period.

Formation, development and operation of the RT

The formation of the Resource Team (RT) was informed by the partnership letter signed by the DG. The DG suggested that the RTs include lower-ranking officers from the four MoH departments where the NSSG members work - specifically, all assistant commissioners so that they could update their commissioners after each MSI activity. However, the final list of RT members included representation from three departments: two assistant commissioners (from nursing and midwifery, and HRM), one Principal Human Resource Officer (HRM), and one Principle Medical Officer from QA&I departments. During the implementation, there have been changes in the RT composition, mainly due to factors including transfers (1) and death (1). It is also worth noting that two RT members transferred to the Health Service Commission (HSC) and the Ministry of Local Government (MoLG). However, the CRT was advised by the NSSG FP to retain them as RT members. There has been regular communication between the RT and CRT members via various media. The RT members have also been actively engaged in various MSI planning and implementation activities. See Table 8 for the establishment and operation of the RT over the programme period.

Table 8: Composition and operationalisation of the NSSG and RT (2018-2021)

	March 2018 (Establishment)	2019 (How NSSG operated)	2020 (How NSSG operated)	2021 (How NSSG operated)
NSSG Members/ Operationalisation	1. Dr Henry Mwebesa, Director general 2. Dr Joseph Okware, Commissioner QA&I 3. Dr Opio Okiror Stephen, Commissioner, Human Resource 4. Management (HRM) 5. Sr Harriet Atim Mariam, Acting Commissioner, Nursing and Midwifery (March-June 2018) and Sr Petua Olobo Kiboko (June 2018) 6. Dr Sarah Byakika, Commissioner, Health Services (Planning)	1. Dr Joseph Okware, NSSG FP, Commissioner, Standards, Compliance, Accreditation and Patient Protection (SCAPP) (Formerly QA&I) 2. HRH TWG 3. SMEAR TWG	1. Dr Joseph Okware, NSSG FP, Director Governance and Regulation 2. HRH TWG 3. GOSPOR TWG (Formerly SMEAR)	1. Dr Joseph Okware, NSSG FP, Director Governance and Regulation 2. HRH TWG 3. GOSPOR TWG (Formerly SMEAR)
	May 2018 (Establishment)	**2019 (Changes in composition)**	**2020 (Changes in composition)**	**2021 (Changes in composition)**
Resource Team (RT)	1. Mr Samson Olum – Ag Assistant Commissioner 2. Dr Martin Ssendyona- Principal Medical Officer, QA&I 3. Mr Adroa Godfrey Oyo - Principal Human Resource Officer (MoH) 4. Sr Harriet Atim Mariam, Acting Commissioner, Nursing and Midwifery (March-June 2018) and Sr Petua Olobo Kiboko (June 2018)	1. Mr Samson Olum - Ag Commissioner 2. Dr Martin Ssendyona- Principal Medical Officer, SCAPP 3. Mr Adroa Godfrey Oyo - Principal Human Resource Officer (HSC) 4. Sr Petua Olobo Kiboko, Acting Commissioner, Nursing and Midwifery	1. Mr Samson Olum – Commissioner MoLG 2. Dr Martin Ssendyona- Ag Commissioner SCAPP 3. Mr Adroa Godfrey Oyo - Principle Human Resource officer (HSC) 4. Sr Petua Olobo Kiboko, Acting Commissioner, Nursing and Midwifery (Died January 2020)	1. Mr Samson Olum – Commissioner MoLG 2. Dr Martin Ssendyona- Ag Commissioner SCAPP 3. Mr Adroa Godfrey Oyo - Principle Human Resource officer (HSC)

Development of the scale-up strategy

The development of the scale-up strategy has taken the Uganda team about 3-4 years. The development of the scale-up strategy has been influenced by engagements at sub-national and national levels. The engagements at sub-national level were through various platforms, including orientation and dissemination meetings, problem analysis and workplan development workshops, inter-district meetings, as well as MSI implementation support visits. Such engagements resulted in several adaptations/modifications made to the MSI by the CRT before and during the implementation of the MSI. Stakeholders involved at the sub-national level included DHMTs, administrators (CAO), planners, human resource officers (HR) and political leaders. The adaptation to the MSI implementation is summarised in Table 9 below.

Table 9: The adaptation to the MSI implementation

Year	Adaptions made
2017-18	1. Invited Extended District Health Management Team (eDHMT) for orientation meetings 2. Included a column on indicators in the workplan - these were followed-up/ probed at every support visit 3. Encouragement of DHMTs to use routine data to identify problems for the MSI 4. Inclusion of at least one HCIV/HSD in-charge as part of the core team 5. Introduction of dissemination meetings and invited EDHMTs
2019	1. Adaptations to the reflective diary: eg Luwero DHMT (DG1) created a WhatsApp forum where key TB players in the district could participate regularly and share updates 2. Inter-district meetings in locations outside of the district group 3. A hybrid workshop (combining problem analysis and workplan development). The DHMTs revised their problem tree (for the same problem) and workplan and rolled into implementation of cycle 2 4. Introduced a DHMT self-assessment and confidence discussion in DG1 and later rolled out to DG2 and DG3
2020	1. Increased the number of days for the workshops and inter-district meetings by one day 2. District teams were advised to add HR officers as part of the MSI core team and EDHMT stakeholders, eg the CAO and planner, to some workshops. HR officers are part of EDHMTs and play a critical role in MSI and workforce performance.

Source: Uganda Document review synthesis

At national level, the CRT had engagements with senior management, including the NSSG focal person, Commissioner SCAPP, and former Commissioner HRM for vertical scale-up. There was engagement with technical working groups (TWGs) such as Supervision, Monitoring, Evaluation and Research (SMEAR - renamed Standards Compliance Accreditation and Patients Protection (SCAPP) and later Governance Standards and Policy Regulation (GOSPOR)), Human Resource for Health (HRH), to generate buy-in from policy makers and identify potential funders.

Key features of the scale-up strategy

Key features of the scale-up strategy development illustrate the characteristics, process and adaptations undertaken.

1. Development: Developed in close collaboration with the NSSG focal person, Commissioner SCAPP, former commissioner HRM and the CRT.

2. Engagement with TWGs: Regularly updated during scheduled TWG meetings to improve implementation and coordination at the centre and generate buy-in from policy makers and potential funders.

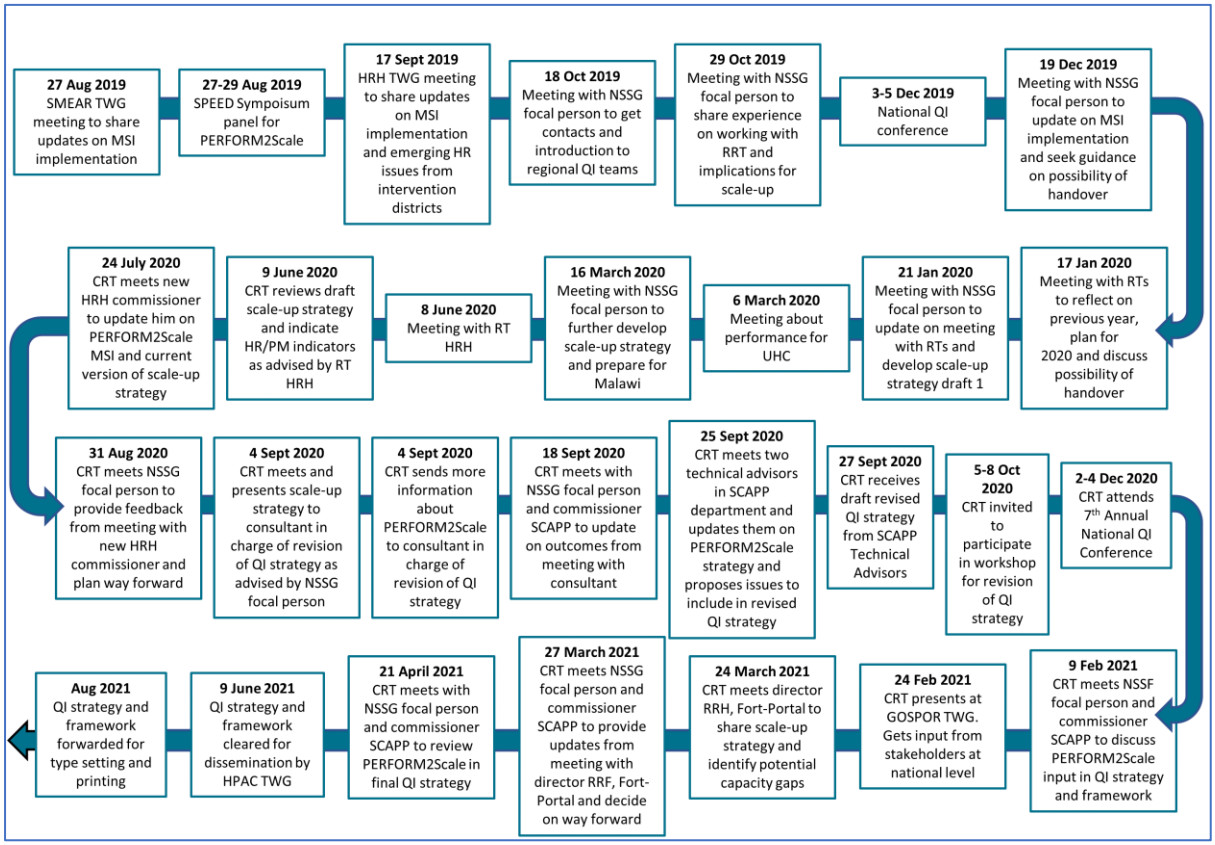
3. Scale-up structure:

- Existing quality improvement and assurance structures at the national level (Quality Assurance and Improvement (QA&I) or SCAPP department) for governance. At the regional level, Quality Assurance and Improvement (QA&I) Committees and Community Health Departments (CHDs) within the 14 regional referral hospitals will support implementation.
- Health workforce performance or HRM component as a result of the MSI are embedded into QI structures and policies (QI strategic plan and framework).
- Human resource management indicators included in the QI framework.

4. Strengthening capacity of QI structures on HRM

Regional QA&I committees and CHDs to be trained to effectively implement HRM in QI processes. Proposal to have collaboration between the MoH and MAKSPH PERFORM2Scale team. Figure 3 highlights the key events related to the development of the scale-up strategy (2019-21).

Figure 3: Key events related to development of the scale-up strategy



8.How do various factors, processes and initiatives facilitate or hinder implementation of the scale-up of the MSI?

Facilitating factors, processes and initiatives

The following are some of the enablers and processes that facilitate implementation of the scale-up of the MSI:

1. **Strong collaboration between the NSSG FP and the CRT**

Despite the difficulties in establishing the NSSG as a group of high-level stakeholders, the resulting close cooperation between the CRT and the NSSG-FP has been a key factor in expediting progress. The NSSG FP's previous engagement as District Health Officer in PERFORM, as well as his previous position in the MoH QI department and current position as director of governance and regulation, means he is in a strategic position to inform the team on strategies to scale-up the MSI within the MoH – and guide part of that process himself as a decision maker. He was previously the chair of the SCAPP TWG (a position which has since been taken over by his direct subordinate (and RT member), the commissioner of SCAPP) and chairs the Senior Management Committee of the MoH. Furthermore, the NSSG FP has clear links to senior management, as his immediate manager is the DG of the MoH. He self-identifies as a champion for the MSI and is seen by the RT and the CRT as such, and indicated he would be willing to continue advocating for the MSI even after the project ends.

"I remember during that meeting, NSSG FP articulated it so well that I almost thought 'that is a PERFORM2Scale hustler' but I actually realised that he was high up there, but he is trying to say the same thing even without having to look at a piece of paper which is something that is nice, but we hope that this momentum continues now and over." (CRT)

2. Involvement of the RT in QI revision process

Because of their important positions and connections to the QI framework, RT members' involvement has been a facilitator for the integration of the MSI into the QI framework. When asked to reflect on the role of the RT in the scale-up process, the NSSG FP indicated:

"National-level head of departments, on being able to explain QI with this element of reflection and with the objective of encouraging teams down to pick the themes within HR aspects of management and planning, I think they should be okay at the national level because they are already trainers of QI and they are members of the national QI committee at national level. So, they should be able to do it." (NSSG FP)

The RT member interviewed indicated that he and others in the RT should be considered as champions.

"Especially those that have been implementing and trained human resource for performance management and strengthening and, of course, ourselves who are at the centre the ministry here and then the School of Public Health or the trainers themselves who have been part of the team. So yes, we are there and advocating for the scaling up, that is quite good from the experience we have had, we feel that it is worthy and indeed should be implemented in other parts of the country." (RT)

3. Contextualised approach to scale-up

With the shift towards integration, a number of key barriers towards convincing stakeholders to scale-up or integrate the MSI seem to have been overcome. First, the embedding of the MSI into the existing structure of the QI has been critical. The CRT noted this consideration was important to convince stakeholders about how to 'sell' the intervention:

"So, the issue is that anything that is different from what that system knows cannot be accepted unless it is adding value to the system itself, to what is existing. And that is why we cannot say that we are selling an action research cycle, everyone knows it, and actually when you adjust them, they don't oppose one another, they are the same." (CRT)

Being able to highlight how the MSI was contextually appropriate became a critical facilitating factor. The NSSG FP emphasised this further by stressing that the "science of improvement through PDSA on QI was already there". Adapting the language of the MSI to that of the QI framework was important in addressing the barrier of language, so that evidence was presented in a way that convinced stakeholders:

"But what we have also found out is that some of the issues we are talking about, issues like teamwork have also been present in the QI language and now they are also becoming more articulated in the current strategy. So, what we are building on is how to pick out some of those issues that are coming out from the MSI as a result, but presenting them as benefits that can actually now contribute to service delivery not because they are countable but because they are as a result of performance management as well." (NSSG FP)

By re-imagining scale-up in terms of integration, political will for 'continuing' QI interventions was largely seen as being present. One RT member shared:

> *"The decision makers, they are also interested in improving the quality of care, that is their area of responsibility, so, any opportunity that is available for improvement, it is usually welcome. And many times, it is what we see when we go to these different structures, we present our proposals for areas of support, and our political leaders have been very supportive throughout for the other areas of quality of care, the minister for example has been attending the quality improvement committee meetings herself throughout." (RT)*

Furthermore, the QI framework fits in within the broader intention of the MoH to devolve some health system responsibilities to decentralised regional levels. Although these regional QI structures may not be operational yet in all districts, the government intends to strengthen human resource performance at these levels. While additional resources for appropriate implementation in all regions need to be secured, the QI framework itself does have some budget attached to it (and there has been a clear precedent during the last five years for funding QI interventions), which will likely make resourcing the hybrid PDSA (Plan, Do, Study/Check/Reflect, Act) cycle easier than if it were a new, standalone intervention.

Both the RT member, NSSG FP and CRT indicated that there is a group of champions supporting the scale-up and integration of the MSI, mostly composed of themselves and some decision makers.

Hindering factors, processes and initiatives

The following are some of the hinderances to the implementation of the scale-up of the MSI:

1. **RT composition is too senior and busy for horizontal scale-up**

One key challenge for the scale-up or integration of the MSI is handing over the facilitation role to the RT. Current national-level RT members are in senior positions and, despite having the right qualifications and experience to facilitate sessions, are generally too busy to take on the role of the CRT for the current district groups – let alone support further scale-up to other districts. The RT role is to be taken up by the regional level QI teams. The NSSG FP reflected on this:

> *"The research team that has been doing this work definitely was very strong, but in our scale-up plan we were knowing that the current research team can't cover all the 14 regions, we want to involve officers from the regional levels to become like the RT at that level and be able to take his forward." (NSSG FP)*

2. **NSSG-RT scale-up infrastructure created a parallel structure**

One of the key underlying issues identified by the CRT that hindered scale-up was that much time was spent trying to set up an infrastructure of RT and NSSG members that was considered a parallel structure to already existing structures. The CRT explained:

> *"So, if we are to do it all over again, we would never again say we are going to construct an NSSG. But we would go through the same advice as they told us to use the system. So, we decided to have the NSSG FP as the focal person and also get through the TWGs, to keep on guiding us, as well of course in addition to the RTs as they went on. I think that was something that we took long to understand or to see the impact of, because we were quite frustrated around that particular issue as well." (CRT)*

3. **COVID-19 caused delays in the scale-up process**

The CRT, NSSG FP, and RT all mentioned that COVID-19 caused significant delays in not only the implementation of the MSI but also in efforts to scale-up or integrate the MSI. In particular, during the initial period of the pandemic, it was more difficult to secure meetings with key stakeholders, and meetings were postponed. As a result, the QI framework revision has not been approved yet. However, while the effects of COVID-19 were mostly experienced as obstacles, the NSSG FP indicated that the increased burden on the healthcare workforce as a result of the pandemic may provide an additional incentive for the inclusion of MSI aspects in the QI framework.

4. **Evidence collected on the MSI was not always convincing for key stakeholders**

There was a perceived mismatch between the type of evidence collected and the type of evidence needed to convince stakeholders. Stakeholders in the TWGs valued quantitative data more than qualitative data, as the CRT reflected:

> *"The other challenge [...] is that evidence would be appreciated more if it was quantitative. And every time they asked us for evidence, they wanted to see numbers. But the issue which we leant over time is that management is a bit complex in a way that it does not necessarily always give you numbers, it only gives you proxies and what matters in management is mainly the processes that happen around that actually contribute to the service delivery. So also, the issue of trying to market the importance of qualitative evidence also became key in this journey. Explanations as to why things happened the way they are also became pertinent, but the issue is that evidence is seen as quantitative, if it is not countable, it doesn't count. But I think we have learnt that this is a bit different, you have to do both." (CRT)*

A similar issue was perceived by the CRT when it comes to costing data, where the actual costs of implementation were not clearly showcased:

> *"… we haven't used any of the costing data to convince. And again, this is something that we have discussed internally as CRT and we kept on reflecting and we said 'fine, which data are we collecting?' We were collecting costing data as per contact hour, yes, so contact with the RT, contact with the DHMTs. This is fuel, per diem, materials, hotels, professional fees. But what we never really costed was the MSI activities [activities as part of the action research cycles]. That was the most important data because if we are trying to say that they are using resources available, we never added any resources, they were using what was available which was very important to know okay fine, how much did it cost the district? And that information would have been helpful for policy makers to understand and integrate. It is very difficult for us to come and say 'fine, when I used an RT member, I gave them per diem of about 50 euros'. But government already has a standard of about say 60 euros, you know what I mean? So at the end of the day, they already have their standard, it is not me to come and tell them that see, change your per diem rates. So, the costing data we were collecting, I find it was very limiting." (CRT)*

The CRT also reflected on the difficulties with attribution of the MSI to service delivery changes:

> *"But also, I think on reflection as I heard about the issue of costing, it is the same dilemma that we may have as we attribute some of our effects within the Theory of Change on service delivery. Okay, it is some of the MSIs that have had an HR lens on service delivery, not all; although we were collecting data from the health management information system over the*

years for maybe different districts. So, we are going to say that we had an impact on those service indicators as they changed? It may not be a right way of presenting it, I think this also a time for us as a consortium to start reflecting on what is it that was in our sphere of control or sphere of influence and how do we then go back and report to the European Commission and say 'well, this is what we envisioned, and this is what it is' and then see the middle ground of how to renew some of those loose ends. " (CRT)

5. Challenges with political support for integration of the MSI

While political support for the integration of the MSI was seen by the CRT, RT and the NSSG as something that could be secured, not all necessary stakeholders were fully on board. According to the CRT:

> *"The current commissioner QI was not necessarily on board whereas he was with us, so we had to try and explain and explain again. So he is turning around, from last year we see him trying to turn a new leaf and getting on board and for us we feel that is a good thing and it is a progress in the right direction" (CRT)*

According to the NSSG FP, the newly appointed commissioner HRD also remains to be convinced:

> *"The current commissioner who has come on board is a very senior person, has worked in the sector for very long and has worked in different ministries and they have tried so many approaches to improve on workforce performance, maybe sometimes without success. So he came on board with that believe that it's not possible, but we managed to sit him down and have one [meeting] with him, to give him the evidence available and in my view, his view is changing, it has not totally changed but his view is definitely changing." (NSSG FP)*

Moreover, the NSSG FP indicated that actors, such as members of the Senior Management Committee in the MoH, had not yet been sufficiently involved. COVID-19 caused serious delays in timelines, and meant the CRT and NSSG did not manage to reach out to some important stakeholders:

> *"After the thinking in the small group as we were, we should have taken this to different [stakeholders], for example may be to one or two regions, discuss with them and get their input and then come back but because of COVID-19 that came up, we could not share with as many regions as possible, that is one thing, we would have probably taken it to the regional level." (NSSG FP)*

The RT member echoed the need to engage the senior level, as well as emphasising the importance of convincing the regional and district-level stakeholders:

> *"May be, of course, what we still have to do is to get the topmost leaders who determine policy, those are the structures I talked about, we also need to engage and bring them also on the same level. So, as we work, we need to present them a report coming up, and the work done, definitely this will be achieved in the long run. Also, we have the actors in the districts, we have the regional referral hospitals, they are very big actors and at the moment I think we need to do more also to bring them on the same level. Because the policy now for government is shifting, we have the key interventions in districts to be coordinated more with the regional referral hospitals. And I think here we have not yet done even now to make them familiar about this development. So that is what we need to do, yes" (RT)*

6. Regional-level infrastructure is not yet sufficiently capacitated

Integration of certain components of the MSI into the QI framework brings several opportunities. However, this also creates some challenges that are linked to the actual implementation of the QI framework. For example, the infrastructure needed to run the new hybrid QI cycle includes the regional level QI teams taking an increased role while the national-level stakeholders play a more indirect role in providing overall guidance. However, while regional level QI teams have (or should have) been supporting districts with their PDSA cycles during the last QI framework's implementation period, the NSSG FP indicated that only a few of the 14 regional-level teams are currently active and appropriately skilled to facilitate these cycles. The CRT indicated that they, together with the guidance of the NSSG FP and SCAPP acting commissioner, were able to bring on-board key members at the regional level to start participating in the planning and observation/reflection stages of the MSI to convince them of the added value of this element of the MSI. However, handover to the regions did not seem feasible, as active teams were not yet established. As result, the NSSG FP and CRT stressed that the scale-up strategy should include a focus on training and strengthening capacity in regional QI teams. The intention is that these teams will eventually take on a role similar to a regional RT.

7. Need to secure additional financial resources remains

Finding resources for the scale-up of the MSI has been a problem since the inception of the PERFORM2Scale project. Overall, the lack of additional budget at district level, and running a district-level programme that enables districts to make smarter use of existing budgets, was appreciated by stakeholders at district and national levels. However, when it comes to the facilitation and meeting costs that come with implementing the MSI into CQI processes, the absence of dedicated donor resources was seen as a hindering factor in convincing stakeholders.

Adequate financial support for the new QI framework also remains an unanswered question. As components of the MSI will potentially be integrated in the QI framework, finances for this will depend on the budget that will be made available for this strategy. Those budgets are known to be inadequate, and additional resources for a (national level) group, such as the CRT, to build the capacities of regional teams would still need to be secured. Essentially, support from development partners will be necessary to fully implement the QI Framework in each region. Currently, each of the 14 regions are already supported by partners (either USAID or the Centre for Disease Control) to implement the QI process. The NSSG FP explained that approval of the new QI framework may act as a tool for additional resource mobilisation from these partners, which may secure funding for MSI elements if they are included:

> *"Then we expect some funding from partners and each region has the USAID or CDC partners that is supporting the QI process there. So, those are the two areas where we would tap into some resources, but we can't negotiate for resources directly for QI from Ministry of Finance, that is not how it works in Uganda." (NSSG FP)*

9.What are the costs of the scale-up?

This section presents analysis of costs populated on a monthly basis per calendar year. It captures information on costs incurred by the CRT/NSSG FP for scale-up activities.

The average and percentage distribution of MSI and scale-up costs by the five costing centres/activity are shown in Tables 5 and 6.

Personnel expenditures, including compensation of the NSSG FP for the oversight role and direction of scale-up activities, accounted for 46% of the costs incurred during MSI scale-up. Other costs, such as conference space rental, etc, accounted for 49% of the scale-up expenditure.

10.What are the outcomes/ effects of scaling up the MSI?

To date, the MSI has been implemented in nine districts. Collective effects on management competence, workforce performance and service delivery were expected from these multiple cycles of the MSI.

Management competence

1. Over time, management skills, such as problem identification, root cause analysis, developing feasible strategies as well as workplan development and implementation, have improved. We have also seen better teamwork and working relationships over time.
2. In comparison to cycle 1, the DHMTs said that they gained confidence in cycles 2 and 3. Several sources show that the DHMTs and sub-teams have increased their capacity over time, both individually and as a group. This confidence is shown in their ability to operate within existing resources.
3. DHMTs are more confident in their ability to transfer knowledge and skills to their technical areas of work, as well as support their colleagues and lower-level managers and other departments/districts. This has been enabled by their deep familiarity with the MSI processes, how to apply MSI skills and practices in their daily work.
4. DHMTs reported that they learned to be innovative and creative with no added resources. However, their ability to continue with this innovation is not guaranteed.

Human resources

1. Over time, the DHMTs improved their understanding of health workforce performance in the health department. They are now able to identify causes of poor performance, develop feasible solutions and monitor the effects of the strategies. Further, they are able to link health worker performance to service delivery.

2. As the CRT continually urged the DHMTs to sufficiently think about gender needs and plan accordingly, the DHMTs were able to appreciate the gender lens approach. Consequently, district plans and decisions about health worker transfers and responsibilities, among other things, changed overtime. For example, the DHT started appointing some female health facility in-charges where previously they assumed that "to manage" was a male role.

Service delivery

The MSI strengthened the DHMTs' approach to addressing service delivery challenges in their respective districts. Consequently, between the cycles, the DHMTs reported having grown in terms of analysing service delivery problems and working through how to address them. This was enabled by the strong team approach adopted as a result of the MSI cycles. However, there is not enough evidence to demonstrate the collective effects of the repeated MSI cycles on improving service delivery.

MSI embedded in DHMT way of working

A key outcome of the implementation of the MSI is its embedment in the DHMTs' way of working. This is evidenced by the embedding of the MSI activities into the district budget and planning routines at the various levels of operation within the district health structure (health facilities, municipalities, etc.). This is mainly highlighted under integration and lobbying for additional resources as below.

a. Integration into district budget/ Primary Health Care fund (PHC)

In DGs 1 and 2, by MSI cycle 2 and 3 the DHMTs had integrated most of their MSI activities and workplans into the district budgets and were aligned with the planning cycles. This observation was a positive innovation as the majority of the MSI activities were also routine management functions, such as support supervision, monitoring, appraisals etc. In DG3, the learning from groups 1 and 2 meant the district was able to quickly use this same approach guided by the CRT.

b. Lobbying resources and integration in partner-funded activities

Through the MSI, DHMTs were able to develop skills in lobbying resources from implementing partners to support some MSI activities. The project tools (tool 10) enabled this. Further, at the time of workplan development, the DHMTs were able to include some activities with the consideration of the available partners already supporting some activities, or were knowledgeable of partners with resources to support workforce performance and quality improvement.

Some DHMT members perceived the MSI as a parallel project to their routine duties

Integration of most of the MSI activities within other activities was noted as a good innovation by DHMTs in lieu of the additional funding provided. However, the findings also indicate that the MSI was still perceived as a parallel project by some of the DHMT members. For example, some DHMTs complained that due to their busy schedules, they were unable to hold MSI reflection and planning meetings. Others reported a challenge of managing time for many other roles in the district in addition to participating in MSI activities.

Other sectors interested in using MSI

Apart from the example in Wakiso district mentioned above, there is no strong evidence to suggest other sectors would be interested in using the MSI approach. However, several DHMT members from DG1 highlighted that in their MSI 1, they addressed staff absenteeism, which was a national problem. Their presentations of progress during the inter-district meeting and regional meetings aroused interest from stakeholders at national level. Besides the active collaboration of implementing partners in the district, national interest in workforce performance may have created some interest in other sectors as well.

Institutionalisation of scale-up of the MSI

The vertical scale-up took a slightly different path, and not as envisaged at the time of project design and through the route proposed by the ExpandNet framework. Adaptation of the MSI to integrate it into the QI framework was the form of institutionalisation taken in Uganda for the following reasons.

1. RT members informed the CRTs that they might not be the right ones to take over implementation, and suggested using "existing structures," ie the Quality Improvement framework, which is similar to MSI.

2. At the national workshop (2018), it became clear that many of the intended NSSG members were too busy to participate. This resulted in the NSSG FP being the only active member of the NSSG.

3. NSSG members, through their RT members, encouraged the CRT to share findings from the MSI through Technical Working Groups (SMEAR and HRH TWGS) to facilitate the scale-up. The TWGs comprised members of the MoH senior technical team.

4. Vertical scale-up requires ongoing engagement with stakeholders, including those who were initially thought to be on board, as well as connections to more powerful stakeholders in the MoH hierarchy. The NSSG FP and CRT are now in the process of convincing the different stakeholders that the revised QI framework (including MSI components) needs to go to the different working groups for approval.

Plans for sustaining future scale-up after the end of the project

The plan was made to integrate the MSI into the national QI framework to support the scale-up after the end of the project. Sustainability of the MSI and future scale-up lies with the approval of the QI framework (that includes components of the MSI) by the MoH top management committee, which is the decision-making body of the ministry. Before that, the QI consultant will be present, together with the Department of Quality Improvement, during various meetings at the different levels. These steps include

1. Governance, Standards and Policy Regulation (GOSPOR) TWG – chaired by an RT member. Acting Commissioner Standards Accreditation and Patients' Protection (SCAPP)
2. Senior Management Committee – chaired by NSSG FP. Director General Health Services Governance and Regulations.
3. Top Management Committee (TMC) – chaired by the Minister of Health.

How has MSI been applied to addressing problems of COVID-19?

There was little evidence reported about applying the MSI to address the problems of COVID-19. However, COVID-19 caused significant delays in completing MSI cycles in DG1 and 2 and delayed the start of the MSI in DG3. As a result, DHMTs reported being unable to carry out some of the MSI activities due to the diversion of funds to COVID-19 interventions, being unable to meet regularly, and also that the lockdown disrupted workflow. There was also an attempt to apply some MSI principles to COVID-19 problems, such as workforce availability, but the evidence was insufficient to draw a valid conclusion.

COVID-19 also interrupted the scale-up of the MSI efforts. As noted by the RT, NSSG FP and CRT, nationally resources and time were devoted to managing the pandemic. For example, Technical Working Group meetings were halted, and it therefore became difficult to present MSI implementation progress.

Discussion

Introduction

The overall aim of the project is to develop and evaluate a sustainable approach to scaling up a district-level management strengthening intervention (MSI) in different and changing contexts. The implementation of the MSI across nine districts and with recurring cycles over three to four years has provided many lessons about the MSI as a scalable intervention. At the same time, we have learnt much about the scale-up process itself. Lessons include the planning of structures to support the scale-up, the identification and use of stakeholders to support the scale-up, and the influence of the policy context and resource availability on scale-up.

MSI as a scalable intervention

The workplans developed as part of the MSI led to some improvement in workforce performance and service delivery within the respective districts. Moreover, the MSI was effective in improving management competencies of the DHMT, such as problem identification, prioritisation, and development of feasible strategies. There are certain elements of the MSI approach that facilitated management strengthening. This is particularly evident when the DHMT goes through multiple cycles, where learning from one cycle is applied to subsequent cycles resulting in deepening the management strengthening. The MSI provides platforms for managers to learn from each other, such as the workshops for problem analysis and strategy development, and the subsequent inter-district meetings to jointly review progress. These platforms allowed tacit knowledge held by DHMTs to emerge and be applied to problem solving within their districts.

According to results from the management competency survey, there was an increase in the number or participants rating their management competencies as 'good', however, there was a reduction of the number rating their competencies as 'excellent'. Sometimes management strengthening initiatives help managers realise what they do not know.

The facilitators also had technical knowledge and experience that they were able to share with the DHMTs which they then applied in analysing and addressing problems. Inclusion of wider stakeholders in the MSI was picked up as an important factor in the Initial Context Analysis, and this is confirmed in our experience here. By including wider stakeholders within the district, the DHMTs were able to draw upon their knowledge and expertise in designing strategies and workplans, and get their support in implementing them.

Reflection as part of the management strengthening cycle is critical in achieving learning. It is complex and difficult but should be seen more as an embedded behaviour rather than a step in a cycle requiring certain tools such as a reflective diary. These tools can facilitate reflection, but what is really needed is facilitated discussion in a supportive and trusting environment where people can ask and respond to challenging questions, as we have seen in the inter-district meetings, workshops, visits and telephone calls. Facilitators need to be able to create and sustain the environments of support critical reflection. This emphasis on reflection as a behaviour should be included in further expansion or adaptation of the MSI.

The DHMTs were able to consider gender in the development of their problem analyses and workplan development, but there may have been some 'crowding out' of gender issues during workshops and inter-district meetings due to all the other concepts included in the MSI and the supporting tools.

As a result of going through the MSI, DHMTs have more appreciation and understanding of HR issues including health worker performance. This has enabled them to be more confident in developing feasible and effective strategies. For example, they have implemented actions that have resulted in reductions in absenteeism, and improved performance management systems. If the DHMTs in Uganda were given more discretion or increased decision space, they might be able to manage their staff in a way that is more appropriate and responsive to local needs. In addition, DHMT members have learnt that HR is a major contributor to service delivery outputs, and by carrying out a MSI project on TB that included strategies related to performance management of health workers, they observed improvements in TB cure rates in the district.

In the design of the MSI, it was intentional there were no additional funds for implementation of the workplans. This was perceived both positively and negatively. On the positive side, the DHMTs learnt that resources are not necessarily the problem, but it may be more about using the available resources more efficiently and adopting a more entrepreneurial attitude with local resource mobilisation. On the negative side, the DHMTs noted that some strategies could not be implemented without additional resources and where they innovated still faced resource constraints. Interventions with "no-additional" resource approach, need to take into consideration the context and weigh the balance between advantages and disadvantages.

Contextual factors had a major influence on the implementation and scale-up of the MSI. The implementation of the MSI takes place in a broader health system (not in a vacuum). The DHMTs reported they had limited decision space (and control over staff and finances), and this influences the scale-up of the MSI. Successful implementation of the MSI was hinged on the integration of the MSI workplan into the district workplan and budget in combination with lobbying funders. However, control and scope of implementation of activities is limited. The other contextual factors, such as elections, COVID-19, staff transfers and changes in administrative structures, affected progress of implementation of MSI. Also, some adaptations were made by DHMTs to enable continuity of MSI, implying that DHMTs are more aware of their environment and innovate to achieve management goals.

The DHMT members are positive about the impact of the MSI and are willing to continue, however, the MSI is still seen by some as a parallel project. Incorporation of elements of the MSI into the existing QI processes, including HR focus, platforms for sharing learning and reflection across districts, provides the opportunity for sustainability of the MSI.

Scale-up structures

The PERFORM2Scale project started with a model of scale-up based on the ExpandNet framework. The ExpandNet framework proposes the establishment of a group that represents the institutions or organisations "that seek to or are expected to adopt and implement the innovation on a large scale."[1]. The project created the concept of the National Scale-up Steering Group (NSSG) to carry out this function. The ministries of Health and Local Government were identified as potential 'user organisations' of the MSI in the Uganda context, however, the project and the route taken resulted in a focus on the MoH, despite the fact that there was no clear home/department for the MSI in there. Lessons from other and past scale-up initiatives (eg funded by USAID) have suggested the benefits of involving people who had been part of the early implementation of similar projects to assist with scale-up. This opportunity was made accessible by a former DHO who had participated in

[1] WHO/ExpandNet (2010). Nine steps for developing a scaling-up strategy. Geneva, World Health Organization.

the PERFORM initiative and was now working at a top level in the ministry. It was feasible to acquire access to a major stakeholder inside the MoH through him – the Director General of Health Services. The NSSG was formed after he picked top MoH officials to represent the 'users' for the scale-up. Though this structure was later adjusted, it was only feasible due of the first penetration of the bureaucracy, which is a critical phase in the scaling-up process.

The challenge in selecting high-level officials to serve on a working group such as the NSSG is that they have too many demands on their time to meet as a group, therefore focused and dedicated discussions about planning for scale-up were limited. The concept of the NSSG was perceived by some as a parallel structure that was perhaps inappropriate for a relatively small programme – at least compared to district-level programmes funded by USAID or UNICEF. These challenges were resolved by utilising context-specific structures at the national level, such as SMEAR/SCAPP and HRH Technical Working Groups which focused on quality improvement and health workforce issues. A national coordinator (NSSG Focal Person) was also appointed from the NSSG membership. The working groups and the NSSG FP provided technical and stakeholder guidance to PERFORM2Scale, however, the forum for discussing and planning the scale-up strategy was limited, with most discussions taking place with the NSSG FP. It may seem logical to have representatives from user organisations to oversee the scale-up of an intervention that they would benefit from, but in practice existing structures have to be leveraged.

The members of the Resource Team were appointed by the Director General from departments related to the MSI project. The RT members supported the CRT in the facilitation of the MSI and the scale-up to nine districts. They contributed their individual expertise to the programme, for which they were greatly respected by the DHMTs. They were, however, busy people at too senior a level to be able to take over the day-to-day running of the MSI from the CRT at the end of the project if the MSI continued in its current form. There is a trade-off between level of seniority of facilitators supporting initiatives like the MSI and their availability to take over the day-to-day management of the programme. Transferring such programmes will be challenging without finding the right compromise.

Stakeholder support for scaling up the MSI

Many DHMTs quite quickly became advocates for the MSI approach. However, the avenues for sharing their enthusiasm were limited to their respective districts and regions. The national workshop in November 2018 showcased the MSIs from DG1, but due to low attendance it is unlikely to have generated much stakeholder support. Showcasing the MSI in other forums was challenging. Stakeholders within the relevant ministry committees (on Quality Improvement and Human Resources for Health) were used to being presented with evidence supported by a balance of quantitative and qualitative data to support new interventions. However, this is a challenge for programmes focusing on less easily measurable attributes, such as problem-solving and team-work. 'Observability' is an important criterion in the CORRECT attributes for scalability of an intervention[2]. Observing at close quarters, the RT members were able to see the value of MSIs – especially related to health workforce planning and management – and at least one claimed to be a champion for the scaling up of the MSI and the incorporation of MSI attributes into the QI cycles. This may have been because they had sufficient exposure and time to really understand both the principles and effects of the MSI, unlike the two new QI and HRH commissioners who appeared to be quite sceptical of the merger into the QI initiative. Gaining stakeholder support for complex interventions for which it is

[2] WHO/ExpandNet (2010). Nine steps for developing a scaling-up strategy. Geneva, World Health Organization.

difficult to demonstrate tangible and measurable benefits may be difficult when competing with other clearly proven interventions.

Scale-up within the current policy context and resource limitations

Given the current funding and policy context, and in order to retain some of the benefits of the MSI that could be used on a larger scale, the intervention was adapted to fit within existing structures, particularly those related to quality improvement at both national and regional levels. For example, the HRM component of the MSI has been embedded in the revised QI strategic framework and plan (2021-25) with emphasis on the factors that influence individual health worker performance. This seems a desirable approach for sustainability and national ownership as per the Ugandan context. However, the operationalisation of HRM component of the MSI within the QI would still be a challenge because of limited resources in the health sector in general, and gaps in the capacity to implement the adapted intervention. This presents a further opportunity for learning about implementation and sustainability of adapted interventions that have been embedded within existing structures.

Conclusion

The study has confirmed that the MSI is effective, but there is a need to make improvements. The study has helped to integrate health workforce performance or human resource components into the Quality Improvement Framework 2020–25 (QIF). While it may be something of a compromise, some of the benefits of the intervention may be sustained by incorporating them into a programme that is better embedded in the system. The scale-up journey for PERFORM2Scale has revealed some important lessons for the expansion of similar programmes. The intervention itself may be effective, but it may be difficult to garner sufficient stakeholder support for complex interventions for which observable benefits are difficult to demonstrate. The feasibility of scaling up this programme may be affected by policy environment (context).

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Annexes

Annex 1: detailed MSI case studies (available as a separate document)