Project Number: 733360

Project Acronym: PERFORM2Scale

Project title: Strengthening management at district level to support the achievement of Universal Health Coverage

Malawi Country Report

Deliverable D4.1

D4.1
Malawi Country Report

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Key project information

Title of research programme:	Strengthening management at district level to support the achievement of Universal Health Coverage (PERFORM2Scale)
Reference number:	733360
Name of lead institution:	**Liverpool School of Tropical Medicine** UK (LSTM)
Director:	Tim Martineau
Start date of project:	1st January 2017
Duration of project:	5 years
Key partners:	○ **School of Public Health, University of Ghana,** Ghana (SPH GHANA) ○ **REACH Trust** Malawi (REACH) ○ **School of Public Health, College of Health Sciences, Makerere University** Uganda (MAKERERE) ○ **Swiss Tropical and Public Health Institute** Switzerland (SWISS TPH) ○ **Royal Tropical Institute** Netherlands (KIT) ○ **Centre for Global Health, Trinity College** Ireland (TCD) ○ **Maynooth University** Ireland (NUIM)
Countries covered by the research:	Ghana, Malawi & Uganda
Project website address	www.perform2scale.org
The report is elaborated on the basis of:	Original Grant Agreement
Authors:	REACH Trust, TCD and NUIM teams
Call:	H2020-SC1-2016-RTD
Date of submission:	30th November 2021
Dissemination level:	CONFIDENTIAL

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List of abbreviations

AR	Action research
CHAI	Clinton Health Access Initiative
CHAM	Christian Health Association of Malawi
CRT	Country Research Team
DC	District Commissioner/District Council
DG	District Group
DHMT	District Health Management Team
DHRMD	Department of Human Resource Management and Development
DHO	District Health Officer
DHSS	Director of Health and Social Services
DEHO	District Environmental Health Officer
DfID	Department for International Development
DIP	District Implementation Plan
DMO	District Medical Officer
DNO	District Nursing Officer
DoDMA	Department of Disaster Management Affairs
DPD	Director of Planning and Development
FGD	Focus Group Discussion
FOCCAD	Foundation for Community and Capacity Development
GIZ	German Development Corporation
HIV/AIDS	Human immunodeficiency virus /Acquired immune deficiency syndrome
HRM	Human resource management
ICA	Initial Context Analysis
INGO	International Non-Governmental Organisation
ISS	Integrated supportive supervision
KIT	Royal Tropical Institute
LSTM	Liverpool School of Tropical Medicine
MoLoGRD	Ministry of Local Government and Rural Development
M & E	Monitoring and Evaluation
MoH	Ministry of Health
MoU	Memorandum of Understanding
MSI	Management Strengthening Interventions
NGO	Non-governmental organisation
NSSG	National Scale-up Steering Group
ONSE	Organised Network of Services for Everyone's
ORT	Other recurrent transactions
PERFORM2Scale	PERFORM2Scale
QI	Quality improvement
QMD	Quality Management Directorate
REACH	Research for Equity and Community Health
RT	Resource Team
SDI	Staff Development Institute

ToC	Theory of Change
TORs	Terms of References
WHO	World Health Organization
UHC	Universal Health Coverage
UNICEF	United Nations International Children's Emergency Fund
USAID	United States Agency for International Development

Executive summary

INTRODUCTION

One of the largest existing challenges within global health is to achieve the goal of Universal Health Coverage (UHC) by 2030. This goal entails that all individuals and communities worldwide will be able to access the affordable health care services they need. To achieve UHC an adequate and motivated workforce will be critical to strengthen the health systems and structures responsible for the delivery of quality health care services, particularly in low- and middle-income countries such as Malawi. The PERFORM project developed a district Management Strengthening Intervention (MSI) using an action research cycle approach with the aim of improving the health workforce and service delivery in three African countries - Ghana, Tanzania and Uganda. The MSI was tailored for decentralized district health systems with the understanding that by intervening at the district management level, which is close to frontline health providers, workforce performance of both managers and their staff could be improved. The PERFORM project evaluation showed that the MSI was effective in enabling District Health Management Teams (DHMTs) to improve management based on the local evidence from their situation analysis, solve workforce performance problems and improve health service delivery.

The MSI has since been scaled up in Ghana, Malawi and Uganda with an aim to contribute to UHC, through the subsequent PERFORM2Scale programme. Process and outcome evaluations were done in order to understand the various factors affecting implementation of the MSI and its scale-up.

OVERALL AIM

The overall aim of the PERFORM2scale project is “to develop and evaluate a sustainable approach to scaling up a district level management strengthening intervention in different and changing contexts”.

DESIGN/METHODS

The study design was a case study approach, with a focus on understanding the implementation of the MSI and its scale-up in the nine implementing districts in Malawi. The case studies explore how and why the MSI was implemented and scaled, as well as the context-specific barriers and facilitators to implementation. The case studies have also been used to investigate the impact of the MSI scale-up on management strengthening, health workforce performance, and the delivery and utilisation of health services. In this implementation research study, we used mixed methods – both qualitative and quantitative - for the different research components. These included the initial context analysis, process and outcome evaluations, as well as costing. Data were collected through different tools to answer different research questions. All participants provided consent for their participation in the study.

The qualitative interviews and group discussion were recorded, transcribed verbatim and thematically coded in NVivo 11. Analysis was iterative, with emerging themes analysed as they arose. The data were anonymised, and trustworthiness and integrity were observed throughout the research process.

The quantitative data were analysed using different software. The costing data was collected by year in Excel data files. The data were analysed in Microsoft Excel 2016. The data were then collated to establish the total cost for the MSI and the scale-up interventions by the various activities and cost items. The average costs of a cycle for any one district group of three districts was then calculated by dividing all the cost items by the four cycles implemented.

RESULTS

Malawi is undergoing a slow decentralisation process which impedes the decision making of DHMT members due to prevailing ambiguity of various stakeholders' roles. The decentralisation policy was developed by the central government and implementation is coordinated by the Ministry of Local Government and Rural Development. Within the ongoing decentralisation process, and the changes that will occur in decision-making processes, tensions between the differing levels of government exist related to the practical implications of changing reporting line processes, roles and responsibilities, and financing. While the formal decentralisation policy includes devolved decision-making power, in actual practice much of this decision-making power to enact change currently remains at the central level.

As for the MSI, its implementation in Malawi has demonstrated successes on one hand and challenges on the other. While some DHMTs progressed well in terms of building good teamwork and cordial relationships with District Councils and partners, including obtaining additional funding from the Council, other DHMTs demonstrated little progress in attaining similarly positive engagements and results. The process evaluation has shown that the CRT and RT made significant efforts to improve relationships between the health sector and District Councils. During the implementation process the CRT and RT observed that the exclusion of Council officials during the early stages of MSI cycle 1 in district group 1 (DG1) would render the DHMTs without support and therefore be detrimental to the goals of the MSI. The CRT and RT, therefore, deliberately engaged the Councils in subsequent MSI and scale-up activities across the district groups, which led to improved relationships and successful implementation of the MSI in some of the districts (MSI workshop 1 report, 2019). It is obviously incumbent upon the PERFORM2Scale implementing DHMTs to nurture, further build and safeguard the relationships that have been built between the health sector and the District Council Secretariat to ensure the MSI is sustainable. The cordial relations between the health sector and the Councils may not only help to sustain the gains achieved in PERFORM2Scale, but they have the potential to also influence the sectoral horizontal scale-up of the MSI within the District Council as well as across districts.

The desired outcome of the PERFORM2Scale project is to develop and evaluate a sustainable approach to scaling up a district level management strengthening intervention (MSI) in different and changing contexts. It is envisaged that a strengthened district management will facilitate improved workforce performance and consequently also enhance the quality of health service delivery. In the outcome evaluation, DHTMs mentioned various areas of improvement based on their involvement in the implementation of the MSI cycles. One of the areas in which they reported having improved their skills is problem identification and root cause analysis. With the right problem diagnosis, they are able to find and apply solutions to solve clinical problems, such as tuberculosis and neonatal deaths, to ultimately reduce mortality rates.

At the inception of the project, engagement with MoH directorates of planning, human resources, and quality management, led to an agreement that the championing department for PERFORM2Scale would be the Quality Management Directorate (QMD). This department emerged to be an important player because it is responsible for ensuring quality delivery of services. Furthermore, one of the key pillars of the quality management policy was the Leadership and Governance which linked well with the concept of PERFORM2Scale.

In the process, with the support of the QMD director and his deputy director, the CRT managed to form the NSSG and RT with the QMD director becoming the NSSG chair and the deputy became the

RT Lead. Both the NSSG and RT membership comprised of MoH and MoLG officers and other departments including the Office of the President and Cabinet and the Staff Development Institute. The RTs became the lifeline of the project as they were a team of facilitators that would take over from the CRT after the initial year of the project and champion the horizontal scale up. The RT members were to assist with the implementation for the MSI cycles' subsequent expansion as part of the horizontal 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. Upon completion of the first cycle, the RT would introduce the initiative to another set of three districts to start MSI cycle one while the initial DG would be going into MSI cycle two. The NSSG as a policy advisory body was responsible for vertical scale up as well providing policy guidance to the RT and CRT.

The scale-up process included the development of a concept note outlining the scale-up strategy. The concept note was presented to the NSSG at a meeting organised by the CRT and RT. Then a meeting aimed at integrating PERFORM2Scale into the MoH programmes was conducted. In the process, elements of the PERFORM2Scale district situation analysis tool, covering health financing, human resources, health information, leadership and governance and gender, were incorporated into the MoH's Integrated Supportive Supervision tool (ISS). Also, components of workshops 1 and 2, including the PERFORM2Scale inter-district meetings, were institutionalised into the zonal DHMT quarterly review meetings conducted by the satellite officers of the QMD. What remains to be done at the time of writing is for QMD to start using the new ISS tool, including conducting the zonal DHMT quarterly review meetings, following the adapted format after incorporating elements of the PERFORM2Scale in the satellites. It should be noted that, historically, the satellite has been a controversial structure, however, it remains functional, and it is a critical hub for the institutionalisation of PERFORM2Scale.

During the process and outcome evaluation, a number of factors that could facilitate or impede the scale-up of public health programmes were raised and discussed by interviewees. Themes that emerged were the institutionalisation of the intervention, adequate engagement with stakeholders, evidence to support the scale-up, availability of financial and human resources, and communication and coordination. The decision to scale-up the PERFORM2Scale MSI requires engagement at national and district levels. At national level, the crucial entities are Principal Secretaries and Senior Management Teams, while at the District Council level the District Commissioners (DCs) are vital. The DCs head all sectors of government at the district level, however, to get their advice and endorsement they need the guidance of the Director of Health and Social Services (DHSS) who heads the DHMT. The main challenge to the MSI implementation and its scale-up has been identified as the slow decentralisation process which limits the district managers in making decisions regarding implementation and scale-up. It has also been observed that high staff attrition and vacancy rates negatively impact on the human resources required to implement and scale-up the programme.

Malawi is highly dependent on donor funding which accounts for approximately 40% of the Malawi national budget. As for health financing, donors finance up to 63%, particularly the three priority areas of the health policy: HIV, malaria and sexual and reproductive health. However, the PERFORM2Scale project has demonstrated that given the necessary management skills, including entrepreneurial skills, the DHMTs could still maximise the utilisation of their available meagre resources to solve prioritised problems and improve workforce performance and health service delivery. Due to the cost-neutral methodology of the PERFORM2Scale project, the actual activities in the work plans of the DHMTs were not funded.

PERFORM2Scale tracked the cost incurred in order to provide a comprehensive estimate of the cost of the MSI and scale-up. The results show that the bulk of expenditure relates to direct staffing costs (17%) and per-diems (65%), with other costs being rather minor. In total, the intervention costs are at average about €132,500 per cycle, which is likely to compare favourably to other management strengthening interventions in the public health sectors in Africa.

CONCLUSION/DISCUSSION

The findings have several implications for the implementation and scale-up of the MSI. It is evident that the ongoing process of decentralisation influences how operations are undertaken at district level. DHMTs' decision-making space continues to be limited despite decentralisation, since authority in a number of crucial areas, such as human resource management, seems to remain with central government. Consequently, this may have a negative impact on management strengthening initiatives at district level. Conversely, the decentralisation process increased the power of the DCs in the District Councils, therefore continuous involvement of the DCs in the PERFORM2Scale MSI scale-up is highly critical to its sustainability.

As much remains imprecise in relation to the process of decentralisation, much effort must be made for the MSI to be continuously aligned with the evolving system and the decentralisation process, to ensure that institutionalisation of the MSI will be complete. Strong communication and collaborations within the MoH and between MoH and MoLGRD within the national level, and also between the national and district levels, are very important if the MSI implementation and scale-up are to be sustained. Collaborations with other relevant projects and donors will also be important, as their substantial influence in the country can support the scale-up process.

Just like the initial context analysis informed the implementation and scale-up of the MSI, the process and outcome evaluations conducted thus far have showed that it will be crucial for the Quality Management Directorate (QMD) to further understand underlying power relations and other contextual factors which could hinder the implementation of the institutionalised elements of PERFORM2Scale. Additionally, collating more evidence on the effectiveness of the new approach by QMD could generate more interest from relevant stakeholders, thereby supporting scale-up and sustainability. It is highly likely that, in the changing context of the Malawi health system, strengthening management skills of district managers will make an important contribution to improved delivery of quality health care and the achievement of UHC by 2030.

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 work plans (**plan**),
- implement the work plans (**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 (WHO/ExpandNet 2010). 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 (MoH) to support and eventually lead on the scale-up process.

The political context in Malawi is based on a two-tier system of central and local Government. In contrast, the health system is based on a three-tier system of tertiary, secondary (district) and primary health facilities. The plan within the PERFORM2Scale project was 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 Malawi addresses each of these questions using data collected during the life of the programme, as described in the Methods section that follows. The Findings section is complemented by detailed case studies of the implementation of the MSI in three District Groups (DGs). The report concludes with a Discussion section which provides lessons on the experience of using the MSI in multiple districts and on the process of scale-up of the MSI.

Methods

Study design

The PERFORM2Scale study used an action research methodology in attempts to strengthen health systems in Ghana, Malawi and Uganda through the implementation and scale-up of a management strengthening intervention (MSI). Using a combination of quantitative and qualitative data collection and analysis methods, the evaluation draws upon three areas: initial context analysis, process evaluation and outcome evaluation. This report utilises a case study approach to present the evaluation findings, both broadly for Malawi and more specifically for each district (please refer to the annex for case study summaries).

Initial Context Analysis

The objective of the initial context analysis was to gain insights into the contextual factors that may influence implementation and scale-up of the MSI, with a focus on the extent to which the interplay between politics and economics shapes the health sector in Malawi (PERFORM2Scale ICA Report, 2018). The initial context analysis was further supported by a separate desk review and stakeholder analysis, including semi-structured interviews with 24 respondents at the national and district levels. In addition, a reflective focus group discussion (FGD) with the Country Research Team (CRT) was conducted.

As mentioned, the initial context analysis aimed to examine the political economy in Malawi and its degree of influence on MSI implementation and scale-up. The analysis, which commenced in June 2017 and ended in July 2018, demonstrated that implementation and scale-up of the MSI was heavily dependent upon power plays among the involved stakeholders, as it was seen that politics influenced the decision-making processes and the appointment of controlling officers. It also revealed that with the ongoing decentralisation, regimes were unwilling to concede power for local democratic decentralisation and that unclear roles were emerging between the central-level officers and the District Council officers. In addition, the context analysis also showed that the health sector in Malawi was heavily dependent on donor financing. All these factors were envisaged to affect implementation of the MSI and its eventual scale-up.

Desk review

The desk review aimed to capture existing information related to the factors that could influence the scale-up of the MSI. Conducting a political economy analysis was intended to help ensure the successful implementation and sustainability of the MSI. The desk review was conducted using information collected through a comprehensive review of academic and grey literature sources, including three categories of documents: 16 peer-reviewed academic articles, 18 local and international NGO reports and publications (including UN documents), and 16 Government of Malawi documents (ie government policies, laws). The CRTs collated and synthesized the documents described above to identify the systems and structures of power, and influential stakeholders who could facilitate or hinder MSI scale-up.

Country Research Team reflection on context

Additionally, a FGD aimed to capture the views and experiences of 4 CRT members (1 female and 3 male) regarding factors and actors influencing the implementation and scale-up of the MSI. Using a topic guide, KIT and paired partner researchers (from Swiss TPH) facilitated a discussion with the CRT members on barriers and facilitators to policy implementation, decision makers and their perceptions of the MSI, and stakeholders that might hinder or facilitate scale-up of the MSI.

Semi-structured interviews on context

Semi-structured interviews were conducted to contribute in-depth data related to the experiences of stakeholders at the national and district levels regarding the ways power relations and authority shape institutional change through implementation and/or scale-up.

Interviews were conducted with 21 (8 female, 13 male) stakeholder respondents. At the national level, these included: Ministry of Health officials from the human resources and planning departments; officials from Ministry of Local Government departments of human resources and decentralisation; and representatives of NGOs who have been involved in scaling up interventions. At the district level these included members of the DHMTs and local government department members. A topic guide was used to guide the interviews around the areas of 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

All interviews, including the CRT reflection FGD, were recorded and transcribed verbatim and subsequently entered into NVivo 11 for analysis. Thematic analysis was employed to study literature during the desk review process. The CRT, with support from their paired partner, conducted a critical appraisal of the data sources and engaged their own experiences of living and working in Malawi as an additional analytical lens.

The findings from the desk review were further analysed by asking the question "*How are these findings from the literature relevant for us in PERFORM2Scale*?" A fully fledged separate desk review report was developed. Additionally, a synthesis report from the diverse modes of data collection that were employed within the initial context analysis was developed. The initial context analysis report was produced based on the triangulation method where findings from across the diverse approaches were presented.

Process evaluation

Scale-up tracking

The aim of the process evaluation was to monitor the activities and outputs involved in the implementation and scale-up of the MSI throughout the project, including the costs associated. The

tracking generated insights into the activities that did or did not take place and might provide explanations of certain outcomes of (the scale-up of) the MSI.

An integrated tracking-costing tool was used to collect the data from the period of June 2018 to May 2019 when implementation of the MSI commenced. PERFORM2Scale has been conducting cost tracking of intervention costs only (implementation and scale-up) in order to assess the total cost of the intervention, disaggregate implementation from scale-up costs of the intervention and compare the costs across the consortium. Table 1 below shows the costing elements within the MSI and scale-up:

Table 1: Activity-based cost centres for the scale-up process

Description of activity-based cost centre		Cost type
MSI	Plan step: (a) Detailed problem analysis (b) Development of the work plan	Recurrent
	Observe step: (a) Supervisory visits CRT (b) Joint district meetings	Recurrent
	Reflect step	Recurrent
	Plan step: (a) Detailed problem analysis (b) Development of the work plan	Recurrent
Scale-up	Establishment NSSG, RT	One-time
	Training of facilitators: RT	One-time
	Meetings NSSG / RT	Recurrent
	National workshop	Recurrent
	Other stakeholder meeting	Recurrent
	Cross-district meetings	Recurrent

The analytical approach to costing-tracking was based on a standardized MSI-scale-up costing and budgeting tool in Microsoft Excel. The tool had been developed to collect cost data and to ensure data collected across settings and countries was comparable. The tool also enabled us to model estimated costs for different scenarios. The data collection tool was jointly developed through the process evaluation to provide an integrated process tracking and costing tool. An activity-based approach has been employed to estimate the total costs based on quantities and unit costs of all inputs required for the two cost objects. The assignment of costs through activity-based costing occurs in two stages: 1) Cost objects (ie the scale-up and the MSI); and 2) activities which consume resources and generate costs.

Scale-up assessment

The scale-up assessment aimed to generate insights from key stakeholders involved in the scale-up of the MSI on how the scale-up operates and by what and how it is influenced. Baseline scale-up assessment data was collected in August 2019, with a group of 4 (1 female, 3 males) stakeholder respondents consisting of 1 NSSG member and 3 RT members.

These respondents received a list of statements about factors relevant (or not relevant) for “their scale-up situation” and scored individually whether they agreed or disagreed with the statements. Second, a guided group discussion took place where the outcomes of these individually scored statements were discussed. The topics addressed in the statements were based on a literature

review that identified barriers and facilitators to scale-up and 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.

The post- scale-up assessment was conducted in April 2021 with a group of 7 stakeholders, including 2 NSSG members (1 female, 1male) and 5 RT members (3 female, 2 male).

A thematic analysis was performed during both the baseline and endline assessments by researchers from KIT and the CRT. The coding of all transcripts and notes took place in Nvivo11 according to a coding framework 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, narrative summaries were written, including relevant quotes to support the key emerging themes.

Semi-structured interviews on the MSI

Additional semi-structured interviews were conducted to explore DHMT's perceptions and experiences of the implementation of the MSI, including any barriers and facilitators. These baseline interviews with DHMTs were conducted in August 2019, with the aim to acquire insights on DHMTs' experiences, while post-assessments were employed in April 2021.

The interviews were with 9 (3 female, 6 male) DHMT members at baseline in DG1 and 12 DHMT (4 female, 8 male) at endline. An interview guide was used which included reflective questions on the different steps of the MSI cycle. Participants were purposefully sampled to obtain rich data. Interviews took place with 3 members per district in 3 districts at baseline and 4 districts at endline and included the District Health Officer (DHO) and two additional DHMT members who have been involved in PERFORM2Scale, and an official from the District Council was also interviewed during the endline. At endline, although the plan was to follow the same people that participated at baseline, in some districts new respondents participated due to transfers and posting.

A topic guide was used to lead the interviews, emphasizing 1) their experiences of problem identification and analysis, strategy selection, plan development, implementation of the plan, and reflection on the process and changes, and 2) the effects of the MSI cycle (which will be mainly used for the outcome evaluation). The interviews were conducted by the CRTs and took between one and a half to two hours.

Following both rounds of data collection, a thematic analysis was performed by researchers from KIT and CRT, with the coding of all transcripts and notes taking place in Nvivo11 according to a coding framework 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.

Country Research Team (CRT) reflection (process evaluation)

Aim: To capture the views and experiences of CRTs regarding factors and actors influencing the MSI and the scale-up of the MSI.

Data collection: Baseline CRT reflection was conducted in August 2019. Individual sessions were conducted by researchers from KIT and TCD to minimize the potential for study participants to provide socially desirable answers on the process of MSI implementation and scale-up. A focus group discussion with 4 members (all male) of the CRT was also conducted during which a topic guide was used. The endline data was collected in April 2021 using the same methodology. Again, 4

members (all male) of the CRT participated. Aim: To capture the views and experiences of CRTs regarding factors and actors influencing the MSI and the scale-up of the MSI.

Data collection: Baseline CRT reflection was conducted in August 2019. Individual sessions were conducted by researchers from KIT and TCD to minimize the potential for study participants to provide socially desirable answers on the process of MSI implementation and scale-up. A focus group discussion with 4 members (all male) of the CRT was also conducted during which a topic guide was used.

The endline data was collected in April 2021 using the same methodology. Again, 4 members (all male) of the CRT participated.

The group discussion was recorded, verbatim transcribed and anonymized. In addition, detailed notes were taken during the interviews and group discussions. A thematic analysis was performed by researchers from the CRT and KIT and coding of all transcripts and notes took place in Nvivo11 according to a coding framework 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. This data also informed the development of the narrative summaries described in earlier sections.

Semi-structured interviews with additional stakeholders
Additional stakeholder interviews were conducted to explore the perceptions and experiences of stakeholders on the MSI implementation and effects, and the scale-up process and effects. During the baseline data collection in August 2019, no interviews with additional stakeholders were conducted. However, during the endline in April 2021, interviews with an additional 3 stakeholders were conducted. The stakeholders included 1 respondent from the UN, 1 from an international NGO and another 1 respondent from government to deepen the breadth and depth of data.

Outcome evaluation

District situation analysis
Aim: The aim of the district situation analysis was 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.

Data collection: Using a data collection form, data from routine Health Management Information System (HMIS), 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. Data to inform the situation analysis were collected prior to the commencement of the PERFORM2SCALE project, upon entry into a new district group (DG).

Management competency survey
Aim: The aim of the management competency survey was to assess the management competencies of the DHMTs at baseline and endline in order to measure the effects of the MSI on district health managers' management competencies.

Data collection: At baseline in April 2018, a cross-sectional survey was conducted to make an assessment of the managerial capacity at district level prior to the planned MSI implementation in June 2018. The inclusion criteria for study participation in the survey were: 1) working at the district health administration in one of the selected PERFORM2Scale districts at the time of the study, and 2) having a management and/or leadership role, including supervision responsibilities. A total of 15 (7 female, 8 male) district health managers participated in the survey.

The data were collected through a quantitative survey that was distributed to the selected district health managers from the three districts in DG1 at baseline (Project Year 1) and endline (Project year 4). The tool covers the following areas: socio-demographic information, role and responsibilities in in the DHMT, management experience, competencies related to planning, implementing, observing and reflection, general management and people leadership skills, human resource management, health systems management, and functioning support systems. The survey took approximately 30 minutes to complete. Endline data collection with 16 (9 female, 7 male) district health managers was conducted in April 2021 in DG1 only using a similar approach to baseline data collection.

Analysis: Data from the surveys was analyzed in STATA v.14 (Stata 14; Stata Corp LP, College Station, TX, USA). Descriptive statistics including frequencies, means, standard deviation, range and proportions were used to summarize and stratify the data by country.

Decision space assessment

Aim: The aim of the decision space assessment was to explore DHMTs' decision-making space for human resource management and the degree of change that took place within this space following MSI implementation in the DG1 districts of Salima, Dowa and Ntchisi. Table 2 below shows the number of DHMT members that participated in the assessment disaggregated by gender.

Table 2: Participants' characteristics

District	Participants' roles and gender	
	Baseline study 2018	Endline study 2021
Salima	1. Human Resource Officer **(Female)** 2. District Medical Officer **(Male)** 3. Administrator **(Male)** 4. District Health Officer **(Female)**	1. Senior Nursing Officer **(Female)** 2. District Medical Officer **(Male)** 3. Accountant **(Female)** 4. Administrator **(Male)**
Dowa	1. Senior District Health Officer **(Male)** 2. District Medical Officer **(Female)** 3. Human Resource Officer **(Male)** 4. Administrator **(Male)**	1. District Environmental Health Officer **(Female)** 2. Accountant **(Female)** 3. Human Resource Management Officer **(Male)** 4. Administrator **(Male)**
Ntchisi	1. Human Resource Officer **(Male)** 2. Accountant **(Female)** 3. District Medical Officer **(Male)** 4. District Health Officer **(Male)**	1. District Medical Officer **(Male)** 2. Human Resource Officer **(Male)** 3. Health Promotion Officer **(Male)** 4. Accountant **(Female)**

Data collection: During the baseline assessment in April 2018, a semi-structured two-part tool was administered to DHMT members. An exploration of how district-level decision making was being shaped by power dynamics at district level was made.

The first part of the tool was a group self-assessment of perceived decision space of DHMT members in human resource management, where the members discussed and reached consensus about their perceived authority. Following the first part of the assessment tool, the CRT facilitated a FGD of approximately 90 minutes with DHMT members to explore their actual practice in human resource management. The same process was repeated in April 2021 as an endline measurement.

Analysis: Following data collection, the FGD was recorded, verbatim transcribed and anonymized and combined with detailed notes that were taken during the interviews and group discussions. A thematic coding analysis was performed by researchers from the CRT and LSTM of all transcripts and notes took place in Nvivo11, guided by a coding framework 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.

Human resource strategies survey
Aim: To track the effects of the human resource and health system strategies implemented in the MSI from a health worker perspective.

Data collection: The baseline was conducted in December 2018 with a sample of 66 (39 female, 27 male) respondents (health workers of different cadres) across the three districts in DG1. Data collection took the form of a self-administered questionnaire that was distributed through the CRTs during site visits. The tool included the following areas: socio-demographic information, including educational background and current position, timeliness and time management, teamwork, general satisfaction with management, intrinsic job satisfaction, organisational commitment, human resource management, training support and quality of care.

The endline data was collected in project year 4 (April 2021) and had a sample of 60 respondents (23 female, 37 male). The respondent took approximately 30 – 40 minutes to complete the questionnaire. The endline basically tracked the respondents from the baseline, however, not all of them were reached as some were not available at the time of conducting the interviews, while others had resigned, transferred to other districts or went for career advancement.
Analysis: Data was entered using Excel version X and exported and analyzed in STATA Version 16 (StataCorp LP, College Station, Texas). Descriptive statistics, mainly frequencies, percentages, means, and standard deviation, were generated. Chi-square test and analysis of variance (ANOVA) were used to test for differences between participant characteristics and district.

First, the sub-scales included in the survey were summarized by constructing a composite variable that represents the average score for every individual across a set of items or questions. Distribution of the composite scores by district was examined using the kernel density plot in order to establish homogeneity. The distribution of composite score varied across districts.

Second, effect size analysis was conducted to characterise the magnitude or difference between health workers' perceptions in the baseline and endline. Effect size is a standardised measure of difference between groups relative to the pooled standard deviation (Vacha-Haase and Thompson, 2004). In this analysis, we report the Hedge's d effect size measure due to sample size imbalance between the baseline and endline and within districts.

Third, we generated a propensity score, which was used to match the health workers in the baseline to similar health workers in the endline using the nearest neighbour approach. The propensity scores were generated using a set of variables: sex, age, duration of the stay at the health, job title or qualification and district using a logit regression model.

Costing scale-up tracking
Aim: The aim of costing scale-up tracking was to provide a comprehensive estimate of the cost of the MSI scale-up.

Data collection: The Excel-based data collection tool allowed for tracking of data on resource quantities and unit costs on areas such as personnel, transport, materials and supplies, and rental of workshop sites. It was integrated into the MSI scale-up tracking tool of the process evaluation. Data was continuously collected by the CRT.

The data that was entered were those that were related to implementation, namely the MSI workshop and scale-up meetings expenditure. This was because these were the costs that were deemed to be considered for sustainability when the government adopts the intervention. On the other hand, research-related costs were not entered in the Excel spreadsheet.

Analysis: This was done using Microsoft Excel 2016 by the paired partner institution (Swiss TPH). The analysis centred on the biggest driver of the costs along the continuum of the activities. In addition, the cost differences between cycles in the same district, between the district groups and between the implementation and scale-up activities were considered. At consortium level, it would be interesting to compare these elements of costs between implementing partners. Table 3 provides an overview of the methods used:

Table 3: 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	4	N/A	4
	3. Semi-structured interviews on context	24	N/A	24
Process evaluation	1. Scale-up tracking	N/A	N/A	NA
	2. Scale-up assessment	4	7	11
	3. CRT reflection	4	4	8
	4. Semi-structured interviews on MSI	9	12	21
	5. Semi-structured interviews with additional stakeholders	3	3	6
Outcome evaluation	1. District situation analysis	N/A	N/A	NA
	2. Management competency survey	15	16	31
	3. Decision space assessment	12	12	24
	4. HR strategies survey	66	60	126
	5. Costing scale-up tracking	N/A	N/A	NA

Limitations of the methods

While the initial context analysis had documented the existence of similar management strengthening interventions in Malawi, and included holding informal discussions with some representatives of INGOs (3 semi-structured interviews with additional stakeholders), getting the buy-in and subsequent engagement of the stakeholders throughout the project was challenging.

Another example of the method's limitations is in the process evaluation, where during the baseline data collection there were no additional stakeholders outside the government stakeholders interviewed, yet the endline data collection included this category of respondents. We did 3 interviews with additional stakeholders – 1 from the UN, 1 from an International NGO and another 1 respondent from government - to deepen the breadth and depth of data.

The limitation with such an approach is that it becomes problematic to draw comparisons across time, thereby making it difficult to ascertain how stakeholders, such as INGOs implementing similar interventions, influenced the project. The ICA had suggested that these players could act both as barriers and facilitators to scaling up, thus it would have been interesting to better understand this potential stakeholder influence over the course of the PERFORM2Scale project implementation in terms of how they facilitated or hindered the success of the project.

Findings

This section is structured by research questions, as listed in table at end of document.

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

Attaining Universal Health Coverage (UHC) by the year 2030 remains a big challenge in global health. This goal entails that all individuals and communities worldwide obtain their health care needs without great cost burden. In order to achieve UHC, a number of factors and assumptions interplay. An adequate and competent workforce is essential for the achievement of UHC.

The PERFORM project initially developed and implemented a district MSI using action research cycles aiming to improve the health workforce and service delivery in Ghana, Tanzania and Uganda. This was based on the premise that workforce performance improvement is best achieved by intervening at district management level, close to frontline health care providers. The evaluation of the PERFORM project demonstrated the effectiveness of the MSI in enabling DHMTs to improve management based on local evidence, solve workforce performance problems and improve service delivery.

The MSI was then planned to be scaled up in Malawi, Ghana and Uganda through the PERFORM2Scale programme. In order to gain clear insight into the contextual factors that might influence the MSI scale-up in Malawi, an Initial Context Analysis (ICA) was conducted with a specific focus on the political economy, to inform the scale-up strategy.

The political administrative arrangement in Malawi entails a two-tier system of central and local government created in 1994 when the country attained democratic governance. As was highlighted in the ICA, Malawi has been and is still undergoing a process of decentralisation. The central government developed the decentralisation policy and offers policy guidance, whereas the Ministry of Local Government and Rural Development (MoLGRD) oversees and coordinates the implementation of decentralisation.

The inherent changes in decision-making processes and current tensions between the levels of government because of the ongoing decentralization were evident. The tensions related to the practical implications of changing processes in terms of reporting lines, roles and responsibilities, and financing. There has been progress in the decentralisation process over the past years, with many functions delegated to the local government. However, the scale-up of the MSI is dependent on both the central and the local level. Vertical scale-up will need decisions at central level, in particular from the senior management of the relevant ministries (Health and Local Government).

The success of the vertical scale-up will therefore depend on proper coordination of these ministries to influence the local government structures at district level to pick up the MSI and imbed it in their routine programmes.

Another factor highlighted in the ICA related to the highly donor-dependent health budgets in Malawi (external funding from donors accounts for at least 40% of the country's national budget). As for the health budget, the donors account for as much as 63%, especially for the three health policy priority areas of HIV, malaria and sexual and reproductive health. The scale-up of the MSI will need availability of adequate resources, which the small national funding pot may not cater for, unless there are innovative ways to cut down on the costs associated with the scale-up of the MSI or if other donors would be interested in funding (parts of) it. The District Councils will need to see true value of the MSI if they are to accommodate it within their small resource base.

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

Because of decentralisation, restructuring between the different levels of the health system has taken place: the District Health Officer (DHO) (now renamed as Director of Health and Social Services, DHSS) reports to the District Council instead of the national MoH and also receives directives from the DC as head of the Council. Decentralisation seems to have resulted in the politicisation of decision making by the DHSS (formerly DHO). This makes the DHSS and the DC important stakeholders at district level, in terms of MSI implementation and scale-up. At national level, the ICA participants mentioned the Principal Secretaries of the Ministry of Health and the Ministry of Local Government as instrumental decision makers for MSI scale-up. As stated above, ICA interviews demonstrated a lack of clear understanding of the roles of different actors in the decentralisation process, especially with regard to the intermediate structure: the zone or satellite level. This should also be taken into account when scaling up the MSI.

The ICA had also identified other stakeholders, such as INGOs and other development partners, as those with enormous power and influence on the decisions of government departments. An observation was made that the position of these stakeholders would act both as a deterrent and enabler to the successful implementation of the PERFORM2Scale MSI and efforts were put in place to engage these stakeholders from the outset. However, as highlighted elsewhere in this report, this proved to be challenging to the extent that at the time of writing this report, it is not yet known how this experience has affected PERFORM2Scale. A validation workshop with stakeholders (including representatives from these INGOs) is being planned and perhaps more learning will emerge from that forum. A separate report will be produced weighing in on the implications of how stakeholder engagement contributed to the success or failure of the PERFORM2Scale project in Malawi.

Despite the decentralisation process, the DHMTs' decision-making space still seems limited, and consequently this might have an impact on scaling up management strengthening initiatives at district level. Authority in a number of crucial areas, such as human resource management, seems to largely remain with central government.

The strategy for scaling up hugely depends on the functionality of the satellite offices. Despite being a functional structure within the MoH's governance structure, the satellite remains a controversial structure. For example, the ICA revealed that legally this satellite structure did not exist because in the early 2000s the Department of Human Resources Management and Development (DHRMD) in the Office of the President and Cabinet (OPC) objected to the establishment of such a structure. Government then argued that with devolution such a structure would not be relevant. In other words, government policy recognises the central and district levels of administration without any

intermediary structure in the administration of health services. However, practically, the MoH, through the Planning directorate, went ahead and instituted the structure (zone/satellite) because, in their view, such a structure would help the directorate better monitor and support the districts. With this background, we learnt that the satellites will be operating under the Quality Management Directorate (QMD) in MoH. The satellites remain a structure of the central level and their roles have shifted from monitoring and evaluation and assisting in the development of district implementation plans, to quality supervision and management. The process evaluation also showed that some officials, both at national and district levels, still have reservations regarding operation of the satellite offices.

Furthermore, the ICA showed that the satellites continue to be controversial because the MoH's insistence on establishing the structure brought confusion to the decentralisation debate and particularly power relations. Some stakeholders are not comfortable with the arrangement, with some arguing that this structure will defeat the purpose of devolution as they allege resources and expertise will be pumped to the satellites rather than the districts. There is also a need to identify opportunities for collaborations and alignment with other projects and donors, given their substantial influence in the country.

In terms of gender equality, there is a low representation of females in higher decision-making positions, despite having a 50:50 official gender policy. There are no serious tensions relating to ethnicity in Malawi where the socio-cultural-ethnic situation is generally characterised by a benign ethnic mix.

3. How is the MSI implemented?

The implementation of the MSI starts with the selection of districts and the orientation of the relevant actors; the DHMTs and the District Councils. Then there is a preparatory phase which consists of the district situation analysis, followed by a systematic identification of the problem to be tackled through the use of a problem tree analysis. This is done at workshop 1, attended by the three participating DHMTs from DG1. A second workshop is held where DHMTs develop strategies and a work plan to solve the identified problems. After this, the DHMTs implement the work plan, and later on reflect on its implementation, before going into a new action research cycle. Table 4 provides an overview of the MSI cycles that have been implemented in Malawi using the action research approach. This is followed by table 5 which presents an overview of the problems that DHMTs selected and their action plans.

Table 4: Overview of action research cycles per district in each DG

MSI Cycles summary table				
DG 1	2018/19	2019/20	2020/21	2021
MSI Cycle 1				
MSI Cycle 2		Disrupted		
MSI Cycle 3				
DG 2				
MSI Cycle 1		Disrupted		
MSI Cycle 2				
DG 3				
MSI Cycle 1				

Key

Initial MSI cycle

Continuation of MSI Cycle

Table 5: Overview of the problems chosen by the districts through the cycles, the action plans developed and the effects of the strategies.

District	Cycle	Problem statement	Actions planned	Effects of action plans
District group 1				
Dowa	Cycle 1	100% of health facilities were not supervised in 2017/18 financial year	• Provide lunch and refreshments to Integrated Supportive Supervision (ISS) Team during supervision • Give rewards (Supervision Medal) to supervision team that has managed to implement their Supervision Plan and give feedback to the facilities • Conduct mentorship sessions with staff (health centre staff, extended DHMT) • Use reflective diaries to remind ISS team on supervision • Conduct preventive motor vehicle maintenance • Formulate proposal and liaison committee	• Motivated DHMT supervision teams • Supervisors and supervisees understand the importance and process of supervision leading to effective supportive supervision • Availability of motor vehicle maintenance plan and vehicles for supervision • Proposal submitted to ONSE secured funding on lunch allowances for DHMT members Overall, the DHMT reported that it had managed to supervise only 20% of the facilities in 2018/2019. They reported having implemented the provision of lunch allowance from their own Other Recurrent Transactions (ORT) budget and also got support from Organised Network of Services for Everyone (ONSE), a health activity funded by USAID, where they conducted the mentorship sessions. They also implemented the routine preventive motor vehicle maintenance.
	Cycle 2	80% of facilities in Dowa were not supervised in 2019/2020	• Provide lunch and refreshments to ISS Team during supervision • Give rewards (Supervision Medal) to supervision team that has managed to implement their Supervision Plan and give feedback to the facilities • Conduct mentorship sessions to staff • Use reflective diaries to remind ISS team on supervision • Conduct preventive motor vehicle maintenance • Formulate proposal and liaison committee	• Motivated DHMT supervision teams • Supervisors and supervisees understand the importance and process of supervision leading to effective supportive supervision • Availability of motor vehicle maintenance plan and vehicles for supervision • Proposal submitted to ONSE secured funding on lunch allowances for DHMT members The Dowa team did not change their focus problem in cycle 2. Instead, they reformulated the problem according to the current situation. Close to the end of cycle 2, Dowa

				reported that they had supervised 79% of the facilities using the action plan they had developed, and they were planning to move to a different problem focusing on immunisation. Due to COVID-19 progress stalled and when resumption of cycle 2 began they are working on the immunisation problem
Ntchisi	Cycle 1	90% of officers from grade K and above did not develop work plans for the past 6 months	• Induction of new staff on how to develop work plans - this exercise was to take 1 week targeting nurses, clinicians and data clerks • Mentorship of existing staff to develop work plans • Monthly job mentorship and review of work plans • Night supervision was introduced • Rewards and sanctions • Health Management Information System (HMIS) and District Implementation Plan (DIP) reviews integration	• The officers had a clear understanding their roles and responsibilities • The staff (officers above grade K) developed their roadmaps and punctuality of staff had improved • Absenteeism during night shifts reduced
	Cycle 2	100% of departmental heads do not compile and submit descriptive reports	• Training of departmental heads and supervisors on compilation of descriptive reports • Mentorship of supervisors • Coordination with Quality Management Department on provision of standard reporting tools • Strengthen supportive supervision among departmental heads • Capacity development in performance appraisal	• Development and submission of reports by the targeted staff • Improved quality of reports • Use of standardised tool for reporting • CRT/RT facilitated the training of DHMTs on how to conduct a performance appraisal. Experts from Department of Human Resource Management and Development (DHRMD) provided the training. The actual performance appraisal was not done because the DHMT still faced challenges with the new tool. It was also reported that descriptive reports were being written but mostly by one department (the nursing department) - the other departments were not adhering to the descriptive reports.

Salima	Cycle 1	More than 50% of health facilities were not supervised in the 2017/2018 fiscal year	• Develop and submit weekly work plans • Conduct regular DHMT meetings • Develop regular supervision schedule • Train supervisors in effective supportive supervision • Develop/adopt supportive supervision tool • Orientate staff on their roles and responsibilities, ie sharing job descriptions • Conduct routine preventive maintenance of motor vehicles • Procure new supportive supervision gadgets	• The officers had clear understanding of their roles and responsibilities • Effective planning for supervision and addressing emerging issues • Promoted uniformity and coverage of supervision by DHMT • Use of standardised tool for reporting • Availability of motor vehicle maintenance plan and vehicles for supervision • Improved data supervisory data management
	Cycle 2	100% of health staff (from grade K and above) were NOT appraised in the year 2018-2019/2020	• Develop and share regular appraisal plan • Capacity building of 8 DHMT and extended DHMT • Develop and sustain appraisal record keeping • Lobby from partners on support for appraisal system • Orient staff on their roles and responsibilities on performance appraisal • Induction of new staff on their roles and responsibilities (job descriptions) and performance appraisal	• Preparation of managers and appraisee for staff performance sessions • Equipped line managers to conduct staff appraisals • Improved personnel management • The officers have a clear understanding of their roles and responsibilities • Availability of Rewards for good performance
District group 2				
Machinga	Cycle 1	76% of reports not entered on time in the DHIS2 in 2018/19 in Machinga district leading to poor decision-making	• Capacity building on effective data management skills • Streamlining report flow (from collectors to delivery points) • Collate data collection tools and standard operating procedures (SOPs) from Ministry of Health	• Improved data quality • Timely reporting and ease of tracking of reports • Improved data collection and adherence to standard operating procedures • Improved timeliness, completeness and accuracy of reports

			• Conduct orientation and mentorship of data clerks and health staff by coordinators • Ensure availability of data management tools in health facilities • Strengthening follow up of non-received reports • Conduct regular supervision by DHMT	• No stock outs of data tools • Improved reporting rates and follow up of reports
Mangochi	Cycle 1	100% of Mangochi District Hospital staff have not been appraised since 2016, contributing to poor service delivery	• Signing of DHMT Performance Agreement Forms • Brief Health Centre Advisory Committee and Health and Environmental Committee on Performance Appraisal System • Orient extended DHMT on performance appraisal system • Development of extended DHMT work plans	Based on the MSI resumption meeting in July 2021, the Mangochi DHMT had not implemented any of the MSI activities. COVID-19 restrictions were the main reason as attention shifted from every other activity to COVID-19-related initiatives
Zomba	Cycle 1	80% of staff in Zomba had not been inducted since 2015 contributing to poor service delivery	• Signing of Memorandum of Understanding (MoU) at sector level • Updating of existing sector database • Lobby for creation of partners' database • Realigning partner activity with DIP (planning together) • Conduct full council meeting • Induction of staff • Integrated supportive supervision • Orientation of staff • Performance appraisal	Deadline for signing MoU set, MoU guidelines sent to all partners. Resistance by some partners, some partners have connections to the DHMT so were resistant to change. There was a DHMT orientation that happened facilitated by a member from Mpemba Staff Development Institute. Thereafter the DHMT embarked on performance appraisals, but this got stuck because of lack of clarity on which forms to use (old versus new forms).

Involved actors

The CRT and the RT acted as facilitators of the MSI, while the DHMTs and to a lesser extent the District Councils were involved in implementation of workplans/action plans as part of the MSI. In the beginning, focus was on the DHMT as implementers, but the CRT and the RT noted a lack of involvement of the District Council, which since the decentralisation acts as a secretariat for all sectors. The District Councils officially have a final say on which projects can be implemented in the districts and could provide additional funding for activities if needed. In a few districts, other partners were indirectly involved in the MSI, especially on supporting DHMTs in implementing the MSI action plans. For example, the Salima DHMT was supported with resources by ONSE and Foundation for Community and Capacity Development (FOCCAD).

From the perspective of district-level study participants, the CRT was involved in facilitating, researching and funding the MSI, while the Ministry of Health provided technical support. According to this participant from District 4, the NSSG and RT were one entity: Ministry of Health.

> *"REACH Trust is more or less like doing research… We are the implementers, but the team from the ministry (NSSG and RT), they are more or less like providing some technical support on how best we are implementing the issues that we identified… But the REACH Trust despite that maybe they had oriented us on how best we can come up with the problem for ourselves, but also they also give some support where they feel they have the resources."* (DHMT Member, District 4, Male)

Differences between cycles 1 and 2

As can be observed from Table 5, there were mixed results in relation to MSI implementation across the districts. MSI cycle 2 in DG1 and MSI cycle 1 in DG2 were generally not implemented well and were not completed at the time of data collection for the second round of the process evaluation (April 2021). Because of the effects of the COVID-19 pandemic, the implementation of MSI cycle 2 in DG1 was disturbed, making it difficult for participants to reflect upon differences between cycles. However, participants seemed more aware of what to do in the second cycle than in the first cycle, possibly because it took some time to grasp the approach of the MSI.

> *"For the first cycle, we had a little bit challenge, in terms of adopting this system. That was our main challenge… the approach exactly. But now in the cycle 2 all we adopted whatever was going on."* (DHMT member, District 2, Male)

Other differences between the cycles were related to the problem that the DHMTs had chosen to work on. For example, in District 3, which chose supervision in the first cycle and performance appraisal in the second cycle, a DHMT member reported that the support they got from partners on the first problem motivated the DHMT. He also indicated that conducting supervision visits improved motivation among DHMT members because of allowances they received, unlike the introduction of performance appraisals, which he said was only perceived to be useful when staff go for promotion interviews.

> *"I think because the activities are too different, for the cycle one people go to the facilities for supervision but there is an element of motivation [allowances], while in this one [cycle 2 – performance appraisal] there is no element of motivation except when you go for promotion." (*DHMT member, District 3, Male)

From the perspective of the CRT, the difference between the two cycles related to improved facilitation by the CRT and the RT over time. During cycle 1 in DG1, despite careful facilitation, there were gaps in the alignment of the problem tree analysis and the strategies that the DHMTs had

formed after workshop 2, prompting the CRT and RT to make several other visits to help the DHMTs polish their strategies and work plans. After identifying this challenge, the CRT and RT took a different approach in the facilitation of the next MSI cycles (MSI workshop 2 report, 2019), which included extending the length of the workshops from the proposed 2.5 days in the PERFORM2Scale guide to 3.5 days (with problem tree analysis and strategy development sessions elongated to cater for better and finalised products). This was to ensure work was conducted on the problem identification and strategy development within the time frame of the workshops. Secondly, facilitation shifted more from the CRT to the RT as part of the embedment/scale-up process.

Involvement of the District Councils has also grown over time. For example, the Councils were not part of MSI workshops 1 and 2 in DG1 cycle 1, however, their involvement was from the second inter-district meeting, based on their instrumental position in the district as described above. From then onwards, the Councils have been involved and have in some districts supported the MSI. For example, in Ntchisi and Salima districts, the human resources (HR) officers from the Council supported the DHMTs on performance appraisal orientation.

> *"…but in the beginning we had, for example, the inter district meeting; we did not involve members from the district council but later on we realized that if we really want this to be scaled -up and for the District Councils to take it on, we needed to have the people to have some sort of more orientation, more than the initial [DEC orientation] one. So, we started to invite them to several events and one of them was inter-district meetings where they were able to really follow what the programme is doing and they appreciated it and awareness was raised to them and they did accept this."* (CRT reflection).

> *"… my fellow friend who is there at the Council, whom we have been working with hand-in-hand, and that one was assisting me in orienting these [DHMT] members ... I was calling him to come, we were together to orient the members... he is the principal of human resources management..."* (DHMT member, District 2, Male).

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

Valuable aspects of the MSI that facilitated MSI implementation

The interviews conducted revealed that the DHMTs valued particular aspects of the MSI. One positive aspect was the in-depth analysis of problems, the eventual development of the strategies for solving the problems, and the monitoring and evaluation (M&E) aspects that are imbedded in the MSI. Some participants felt it is good that the in-depth analysis is done, because it assures them that real problems are identified and solved. Some participants were of the view that the reflection that is part of the MSI is a component of M&E and they thought it should be the norm for all the management decisions and actions they take.

> "*PERFORM2Scale has helped to make in-depth analysis of the problem and also apply the same on other problems we might be facing as district management team. The other benefit is that when it comes to M&E, we want think of the HMIS department. With PERFORM2Scale, we have realized that we can do M&E for everything that we are doing in the health system. Even in procurement we can have an M&E system, even in the HR we can have an M&E system."* (DHMT member, District 4, Male)

The self-identification of problems to solve has been hailed as quite unique when compared to programmes brought by other partners. The prerogative of districts to decide what to tackle gives

them the ownership of the problem and perhaps greater zeal to solve the problem. A member of the NSSG had this to say:

> "*…and that's quite different from other partners who come to the district with already predetermined ideas that what challenges are there in the district and what they want to do with them... But this one is different because they go there, ask the owners 'what are your problems you are meeting'."* (NSSG member, Male)

The in-depth analysis of problems has also taught the DHMTs that for some of the problems they have, they do not necessarily need to wait for partners to help. They can solve some of the problems using their own decisions and resources.

> *"Yeah, because REACH Trust did not come in terms of providing all the necessary resources unlike in the past where we would have the partner support us in everything. But this time it's like we are allowed like a baby that is learning to crawl, sometimes you leave them to walk alone. So, it was the same technique that was used by REACH Trust. Yeah, so we are also able to have our own resources in terms of doing our supervisions."* (DHMT member, District 3, Male)

Another valuable aspect identified were the inter-district meetings that the participating DHMTs hold. These focus on facilitated peer learning as explained in the quote below. This finding was similar to the one made in round 1 of the process evaluation.

> "*At least the orientation meeting, the review meetings that we are having, they are also opening our ways because also you could learn things that are working at our fellow districts like X; but also, X could learn what Y DHO is doing.*" (DHMT member, District 4, Male)

Relationships of DHMTs with District Councils: facilitating MSI implementation if present
District Commissioners (DCs) and the District Council as a whole could play a vital role in MSI implementation. Despite the health budget being labelled, the district could provide additional resources if needed, for which DHMTs would need to make a case.

> *"I think I will not be able to quote directly what the Director of Planning and Development [of the District Council] was saying when we were conducting workshop one, but they were like 'the DHMTs were not telling us about this but there is money only if they can convince us'. So, if the DHMTs present their case very well, they stand a better chance of being funded in their activities."* (CRT reflection)

However, some participants recognised the MSI as a sustainable intervention, because of the emphasis by members of the NSSG and RT that it is a government programme, just supported by REACH Trust. Others were also of the view that what is being implemented under the MSI are actually core duties of the DHMT and the coming of the PERFORM2Scale was just a boost to what should ideally be done. DHMT members also got capacitated and could apply what they have learnt in other districts when transferred.

> *"I think, whenever the REACH Trust was introducing to us, they said they wanted to build capacity, so that we can do on our own but as time went, we were taking it as a health sector project. There was Dr X (director QMD) who was saying this was a programme not a project, so even myself I was saying this is a programme because it is continuous."* (DHMT member, District 2, Male)

"I guess you are talking about sustainability, to me I think the capacity that is given to the managers as long as they remain in the system, they will be able to manage and promote this even after being transferred and also be able to reach new members on how they work." (DHMT member, District 4, Male)

A few participants thought they had acquired the required skills to continue with the MSI without the facilitation of REACH Trust. They indicated that the training they had received, including on problem tree analysis, was sufficient.

"I don't think REACH Trust needs to be involved at each and every stage of the process, because we already had knowledge so I don't think we need more resources from them to support us in terms of the performance appraisal." (DHMT member, District 3, Male)

Difficult aspect of the MSI: reflection

One component of the MSI that has posed a challenge – throughout the PERFORM2Scale programme – is reflection. In some cases, there was reported unwillingness of DHMT members to capture the reflection in diaries, despite efforts by the RT and CRT to encourage the practice. Where some DHMTs did the reflection, what they captured in the diaries were more like minutes and not critical thoughts arrived at after reflection.

"On the individual journals I think it was everyone's duty to have their own, but again as we tend to do I think as an office we don't have one. We just have a communication book for us and we just say basically 'okay this has been handled, this has been sorted out' or 'this needs more time to be dealt with' but we don't like it as the way the reflective journal is supposed to be done. But the one for the DHMT is done and it's the [DHMT member function] always is the one who writes and who deals with it. So, every month we meet, we go through it and go through all the plans we had made and see whether…" (DHMT member, District 3, Female)

Experience from interactions with the DHMTs showed that the diary, as promoted by PERFORM2Scale, is one way to help reflection and also capture it. However, we noted that while DHMTs were capturing their reflections in a diary, through reflection they were able to alter their workplans when they could see they were not working, or design different types of plans in cycle 2 as a result of reflecting on progress in the cycle 1 inter-district meeting. So, the DHMT in the quote above implies that they may not have used the diaries as intended, but they were able to reflect anyway.

In some districts, we learnt that after reflection the DHMT decided to apply the problem analysis approach that they had learned as part of PERFORM2Scale to another problem. As a result of this process, the DHMT identified another mode of community engagement as their priority area of focus for that issue. The DHMT then tasked local leaders with leading the communication about COVID-19 and measures were put in place to ensure that health workers were no longer physically beaten. The local leaders organised and led the public meetings and outlined punishments for those found instigating violence against health workers. The DHMT called this approach "risk, communication and community engagement" and has subsequently been adopted as "the right approach" in the communication department led by the district's health promotion officer (HPO).

Contextual challenges or hindering factors of the MSI implementation

Leadership and commitment
The performance of the DHMTs on the MSI has hinged on the leadership of the Director of Health and Social Services (DHSS) (previously the District Health Officer, DHO). In districts where the DHSS was receptive and committed to the MSI, the team members were generally also more committed to the implementation of their action plans. Some DHMT members mentioned that leadership will continue to be critical in the implementation and sustainability of the MSI, even beyond the lifespan of PERFORM2Scale, and that if the DHSS as a leader is not committed then nothing will move. In two of the four districts visited in round 2 of the process evaluation, DHMT members explicitly stated that MSI implementation has been weak and needs more commitment.

> *"For this cycle 2 on performance appraisal, it will need leadership for it to go on, because the rate it is going on now, I don't think it would go on. If we are to start a third cycle, it will be good, because sometimes, yes, you start something, you fail but that doesn't mean that if you start another thing, you wouldn't do better."* (DHMT member, District 3, Male)

Financial challenges
Although the programme was introduced as a cost-neutral intervention, the problems chosen to be addressed by the districts demanded resources and this has always provided challenges for the districts to implement. In some cases, the resources required may not be much but with limited funding available to the districts the managers did not have a budget line of funds for the problems identified under the MSI.

> *"So, now we needed to find resources in terms of money to try even to just do a little training of some sort and we've been failing to do that."* (DHMT member, District 3, Female)

However, there other districts had been innovative and managed to get funding for the MSI activities from their own funding (as part of the DIP) or partners.

> *"Currently, we have written our partners to assist on the budget, who will be able to give us their feedback in two weeks' time… the involvement of other stakeholder, like National Bank, will energize the whole process*." (DHMT member, District 4, Male)

Staff turnover and issues of hierarchy
Another challenge has been staff turnover, similar to what was found in the first round of the process evaluation. Most of the DHMTs have suffered from this problem. As a result, capacity building among the DHMT members had to be repeated because the new-comers needed orientation and the members were not happy with peer orientation – they preferred it to come from the RT or the CRT.

> *"…and the other challenge, as I said already, the migration of members of staff the DHMT. That has affected us very much, you know on my own as a person I cannot manage to convince the whole DHMT unless they were also involved in the system."* (DHMT member, District 2, Male)

In the case of District 2, the above was related to hierarchy: some DHMT members were on acting positions, ie not of a senior level. Their voices were less heard and orientation of other (more senior) members could not come from them (see next section).

Power dynamics within the DHMTs

Where DHMT teamwork and coordination was good, the implementation of the MSI was good, with all team members equally participating. However, there were some DHMTs that were not working as teams and implementation was difficult. In some DHMTs, professional backgrounds influenced the power relations and distribution of roles in the team as illustrated in the following quote.

> *"The problem of teamwork is quite there but sometimes you can even notice the differences in (professional) backgrounds. That also plays a role, because the differences in background make it difficult for how people grasp and see progress and how to interact. I have noticed that it is easier to work with the clinical and the nursing people… So, for this issue of appraisal, you would expect the administrative (section) to take the leading role because partly is a human resource issue… but it [leading role] was taken by the clinical [department]."* (DHMT member, District 3, Male)

In two out of the four districts visited in April 2021, the DHMTs had little interaction with the District Council. Representatives of the District Council were invited for some of the workshops, but no further interaction happened.

> "*She was invited to come, and she attended the meeting, and that was the first meeting for her to know much about PERFORM2Scale, so if the meeting could continue as we were doing before am sure she could have more information and how she can assist at the Council's level, because that one has got influence of getting may be support from other donors*." (DHMT member, District 2, Male)

As already identified in round 1 of the process evaluation, in a few districts DHMTs had good collaborations with the District Council, and similarly often also with development partners in the districts. These stakeholders worked with the DHMTs and supported them on development and implementation of the district implementation plan after conducting situation analysis and root cause analysis.

COVID-19

The pandemic provided a challenge for the MSI. This challenge was not only faced by the DHMTs, but by the CRT and the RT as well. There were restrictions in meetings, there was staff shifting (at district level) and most of the programmes in the health sector suffered because much attention was now placed on the COVID-19 response. Many DHMT participants referred to COVID-19 as a hindering factor of MSI implementation, while one of them called it "an escape code" for things that were not implemented (that should have been implemented).

> *"… it was like all our energy was going towards thinking about innovative ways of how to tackle COVID-19, so we forgot about other programmes like PERFORM2Scale working on our priority problem. Secondly, the people who were in the leading positions, like the HR, backed down because she was feeling that all the DHMT members are not supporting her because they were doing COVID-19… forgetting this PERFORM2Scale programme."* (DHMT member, District 4, Male)

> *"COVID-19 to us I don't think it played that much role because for me sometimes I feel like it is just an escape code."* (DHMT member, District 3, Male)

Sustainability

Some participants, especially those in districts where MSI implementation was lagging behind, doubted the sustainability of the MSI given the erratic implementation due to COVID-19 but also due to the continuous changes of staff at DHMT level. With many members coming into the DHMT who were not part of the PERFORM2Scale programme, motivation to implement the MSI was thought to be lower.

> *"Ah! If it was being handled before this pandemic, we could say we have got the capacity to do whatever you can give us... So, I thought myself if the project could continue at least a year, maybe wash out this dormant period, maybe would take it and I would say 'no, this is our thing now'. And the other challenge, as I said already, the migration of members of staff the DHMT, that has affected us very much, you know on my own as a person I cannot manage to convince the whole DHMT management team unless they were also involved in the system."* (DHMT member, District 2, Male)

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

Effects of MSI on management strengthening

Study participants were asked whether there were systems in place to help them when completing an assignment within the following areas: 1) Planning and budgeting; 2) Procurement of drugs and other commodities; 3) Data management; 4) Human resource (HR) management, and 5) Community-level structures or groups to enable community involvement. A great improvement in all five domains was reported in the endline within and across the three districts, except for the worsening registered in Salima on support on data management (50% vs 66.7%).

On engagement of community structures, Salima used analytical and communication skills learned from the PERFORM2Scale workshop 1 which helped the DHMT to address problems that affect service delivery at district level. Specifically, the DHMT faced a challenge when it sought to address social behaviour by the community members at the start of COVID-19. At the time, health workers in the district were being beaten on suspicion that they were conducting fake COVID-19 diagnoses. Applying the analytical and management skills they obtained from the PERFORM2Scale intervention, the DHMT used multiple approaches to communicate to the community about COVID-19, as a way of addressing the misinformation on COVID-19 and curbing the violent malpractice.

Approaches included radio messaging, social platforms, the public address systems, and holding community meetings, such as organising community mobilisation to disseminate information during open days. The impact of such approaches was minimal since attendance of the populace was still low.

The DHMTs are responsible for the operation of health services within their districts. Mechanisms to facilitate the operation and enable district health managers to carry out their roles and responsibilities should be available and accessible. The management support systems and structures for the proper functioning of the DHMTs include national/regional standards, procedures and guidelines. When asked about the availability of guidelines (on mass vaccination, malaria management and community mobilization), 40% of the respondents reported moderate availability while 60% reported availability to a large extent at endline compared to zero at baseline.

Another mechanism was the holding of regular management meetings. There was an overall increase in regularity of meetings to a large extent across the districts, from 21.4% in the baseline to 46.7% during the endline. The largest increase was registered in Dowa district which registered a huge leap of 0% at baseline to 40% at endline, followed by Salima which improved from 33.3% at

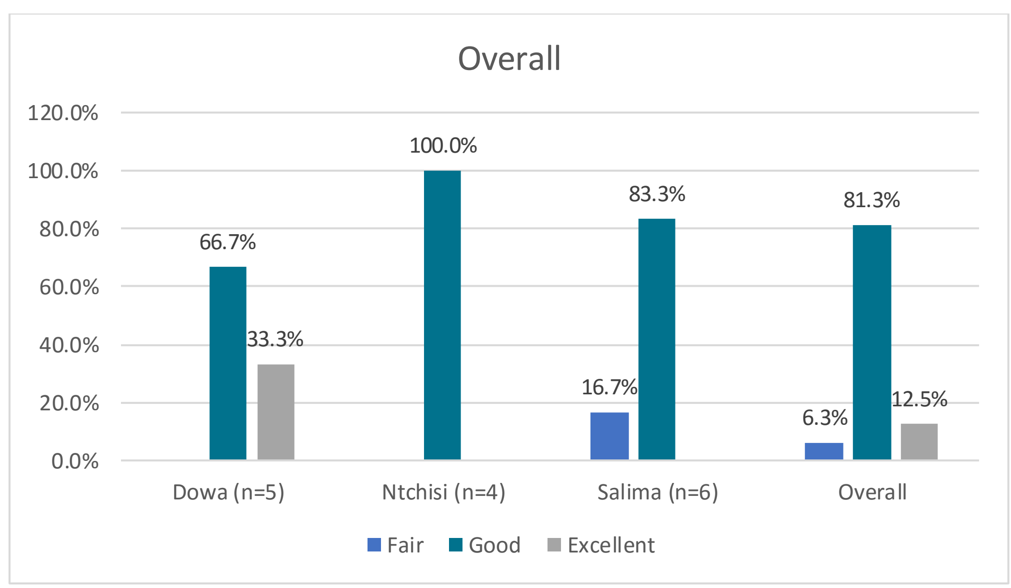
baseline to 66.7% at endline. However, Salima district presents a paradox as it also registered an increase under the category of whether the meetings were being held to a small extent or not at all. Registering an increase from 21.4% at baseline to 33.3% at endline.

On perceived supportive supervision, feedback and mentoring received from the supervisors, the results show a decline across the three districts - from 92.8% in the baseline to 80% in the endline. For individual district analysis, Salima registered the highest increase in perceived supervision, reporting 66.7% endline against 1.67% at baseline. In contrast, Ntchisi, which had appeared to receive the least supervision (25%), was better off at baseline than Dowa (0%), yet at endline Dowa was better off (33%) than Ntchisi (0%). This was confirmed by a respondent who mentioned having started developing workplans on which they assess their performance.

> *"I know how to plan my activities and those activities can be like assessed by; because we do what we call; we have the programme where we have our own indicators where we can be assessed on, yeah, our performance that is. Now I have improved, for example, I have an objective on working on improving media relationship"* (DHMT Member, District 2, Male)

The survey suggests overall improvement on management competencies (see figure 1). There is an increase in the participants' rating of their competencies as 'good' from 53.3% in the baseline to 81.3% in the endline across the three districts. Dowa is the only district that has given an 'excellent' rating by 33.3%, which contributes also to an improved overall perception of the management skills among the DHMT. The male participants' competence rating increased, recording an 'excellent' rating by 12.5% in the endline as compared to 0% in the baseline, and the rating as 'fair' and 'good' decreased from 90% in baseline to 87.6% in endline. The highest ranking was registered among male participants in Dowa, followed by Salima, while Ntchisi district remained constant. Female participants showed a great improvement in their perceived management skills, as 100% rated their competencies as 'good' in the endline compared to 14.3% in the baseline. The highest increase among female participants that rate their skills as 'good' is registered in both Dowa and Ntchisi districts (100% 'fair' in baseline vs 100% 'good' in endline). Figure 1 demonstrates managers' perceptions regarding their level of management skills.

Figure 1: How would you rate your current management skills overall? (Overall, n=15)



The training on performance appraisal included officers from DHRMD who explained that health workers' performance was also assessed by the service users, who observe the performance of the health workers in terms of absenteeism, punctuality, early knock off and absconding from duty. This sensitised the DHMT members that these malpractices have consequences that would come from both the community and their employer. The DHMT, in turn, conveyed the message to managers at both district and primary level to take note and adhere to these standards to avoid clashing with the service user. Thus, PERFORM2Scale made employees who were taking the regulations for granted understand that their performance was not just their responsibility but also a right of the users.

Effects of MSI on workforce performance and service delivery

The MSI improved workforce performance in several of the intervention districts. For example, the PERFORM2Scale MSI also helped to improve health service delivery in Nkhata Bay. Thotho health facility, located in a hard-to-reach area, had not regularly received services such as immunisation, maternal neonatal and child health (MNCH), and HIV services in the past. This challenge was addressed using the PERFORM2Scale MSI approach where DHMTs needed to be resourceful if they were to implement cost-neutral interventions. The DHMT identified lobbying as a means of engaging the central government and other partners through coordination meetings to mobilise resources and re-direct efforts towards health service delivery for Thotho health centre. Using resources mobilised through the DHMT's successful lobbying, Thotho health centre is now being served with full immunisation coverage for children. In addition, delivery of MNCH services resulted in improvement in antenatal and hospital deliveries. Finally, another outcome was that case-holding of people on anti-retroviral therapy improved, as the number of lost-to-follow-up cases reduced.

Table 6: Summary of the effects of MSI of workforce performance across the districts

District	Cycle	Problem statement	Actions planned	Effects of work plans	Effects of MSI on workforce performance and service delivery
District group 1					
Dowa	Cycle 1	100% of health facilities were not supervised in 2017/18 financial year	• Provide lunch and refreshments to Integrated Supportive Supervision (ISS) Team during supervision • Give rewards (Supervision Medal) to supervision team that has managed to implement their Supervision Plan and give feedback to the facilities • Conduct mentorship sessions with staff • Use reflective diaries to remind ISS team on supervision • Conduct preventive motor vehicle maintenance • Formulate proposal and liaison committee	The DHMT reported that they had managed to supervise all facilities in Dowa West and were only left with 3 facilities in Dowa East. They reported having implemented the provision of lunch allowance from their own Other Recurrent Transactions (ORT) budget and also using support from Organised Network of Services for Everyone (ONSE) – a health activity funded by USAID - they conducted the mentorship sessions. They also implemented the routine preventive motor vehicle maintenance.	The DHMT successfully ended a long-term problem which had affected service delivery by: • Renovating the theatre room at the district hospital • Opening a health facility that had remained closed for a number of years Conducted integrated supportive supervision (ISS) of some health facilities using smart phones/ tablets. Supervision gadgets were acquired and the software was installed in all the gadgets.
	Cycle 2	80% of facilities in Dowa were not supervised in 2019/20	• Provide lunch and refreshments to ISS Team during supervision • Give rewards (Supervision Medal) to supervision team that has managed to implement their Supervision Plan and give feedback to the facilities • Conduct mentorship sessions to staff • Use reflective diaries to remind ISS team on supervision	The Dowa team did not change the problem to address in cycle 2 and instead reformulated the problem according to the current situation. Close to the end of cycle 2, Dowa reported that they had supervised 79% of the facilities using the action plan they had developed, and they were planning to move to a different problem on immunisation. Due to the effects of COVID-19, progress stalled	• The DHMT supervised 78% of the facilities in cycle 2 • The instability of HR had negatively affected implementation of the MSI as new members had to be oriented before taking over intervention activities • Emergence of COVID-19 provided a competing priority for DHMT activities.

			• Conduct preventive motor vehicle maintenance • Formulate proposal and liaison committee	and when resumption of cycle two began, they were working on the immunisation problem	
Ntchisi	Cycle 1	90% of officers from grade K and above did not develop work plans for the past 6 months	• Induction of new staff on how to develop work plans. This exercise was to take 1 week, targeting nurses, clinicians and data clerks • Mentorship of existing staff to develop work plans • Introduce night shift supervision • Monthly job mentorship and review of work plans • Rewards and sanctions • Holding Health Management Information System (HMIS) and District Implementation Plan (DIP) to review integration	• Officers had clear roadmaps on what they needed to do in a month as it was presented in the work plans • The DHMT indicated that staff punctuality had improved • Absenteeism during night shifts reduced	Improved quality of health services delivered because: • Individual performance was monitored through ensuring that supervisors are monitoring and building capacity of their supervisees • Punctuality was improved through placement of attendance registers • The attendance registers also helped to reduce absenteeism and abscondment. • The nursing section introduced night supervision
	Cycle 2	100% of departmental heads do not compile and submit descriptive reports	• Training of departmental heads and supervisors on compilation of descriptive reports • Mentorship of supervisors • Coordination with Quality Management Department on provision of standard reporting tools • Strengthen supportive supervision among departmental heads	CRT/RT facilitated the training of DHMTs on how to conduct a performance appraisal. Experts from Department of Human Resource Management and Development (DHRMD) provided the training. The actual performance appraisal was not done because the DHMT still faced challenges with the new tool. It was also reported that while the descriptive reports were being written, these mostly came from one department (the nursing department), with the	• The DHMT was trained on how to conduct performance appraisal • The individual members of staff had signed performance appraisal forms

			• Capacity development in performance appraisal	other departments not adhering to the descriptive reports.	
Salima	Cycle 1	More than 50% of health facilities were not supervised in the 2017/2018 fiscal year	• Develop and submit weekly work plans • Conduct regular DHMT meetings • Develop a regular supervision schedule • Train supervisors in effective supportive supervision • Develop/adopt a supportive supervision tool • Orientate staff on their roles and responsibilities, ie sharing job descriptions • Conduct routine preventive maintenance of motor vehicles • Procure new supportive supervision gadgets	The district 3 team reported the following as being effects of their strategies in the first cycle. • 50% of work plans developed and submitted • 50% success rate - mostly ad hoc meetings take place • 100% team-based supervision schedule • 75% success rate of supervision • 100% DHMTs trained in supportive supervision • 100% app tool available. Trained and piloted on the tool. • Orientation was done mostly for DHMTs and coordinators • Maintenance of vehicles was challenging but later two vehicles were assigned to supervision teams and this worked well for the supervision progress • Received new supportive supervision tools from partners	• DHMT developed and demonstrated entrepreneurial skills • Supportive supervision successes have been sustained despite the fact that they changed the problem in Cycle 2
	Cycle 2	100% of health staff (from grade K and above) were NOT appraised in the year	• Develop and share regular appraisal plan • Capacity building of 8 DHMT and extended DHMT members • Develop and sustain appraisal record keeping	DIP developed and appraisal plan included. Appraisal activity did not follow the developed plan due to financial constraints.	• DHMT made an independent decision to contact partners for funding, something that was never done before • The MSI has brought team confidence. The DHMT

		2018-2019/2020	• Lobby partners for support for appraisal system • Orient staff on their roles and responsibilities on performance appraisal • Induction of new staff on their roles and responsibilities (job descriptions) and performance appraisal	DIP and appraisal activities shared with partners: 2 supported. Continual lobbying from partners for support through stakeholder collaboration. Local government shared revised job descriptions, but some cadres missing. Advised to use previous job descriptions on missing cadres.	introduced diaries at health centre level to use for reflection • Teamwork has been built. The CRT/RT visitors are handled by any officer available and were able to articulate issues under discussion
District group 2					
Machinga	Cycle 1	76% of reports not entered on time in the DHIS2 in 2018/19 in Machinga district leading to poor decision-making	• Capacity building on effective data management skills • Streamlining report flow (from collectors to delivery points) • Improved collation of data collection tools and standard operating procedures (SOPs) from Ministry of Health • Conduct orientation and mentorship of data clerks and health staff by coordinators • Improve availability of data management tools in health facilities • Strengthening follow-up of non-received reports • Conduct regular supervision by DHMT	The DHMT and the data collectors at the facilities successfully used a WhatsApp group to track the reporting of data. All facilities had reported on time, ie before the deadline, except the district hospital which had presented the report on the very last day. The DHMT had emphasised to all health centre in-charges that timely reporting was guided by policy. Focal persons (HMIS-appointed health surveillance assistants) were using their own resources to send reports via WhatsApp as well as hard copies following the verification exercise by the in-charges. HMIS persons were submitting reports with the in-charge. The DHMT had introduced logbooks in all facilities where people signed at the point of departure, similarly, assigning special people to collect reports.	• The electronic submission of reports via WhatsApp has improved on timeliness of submission of reports • WhatsApp is functioning well as a tool for: ○ A support system for supervision ○ Mentorship and feedback ○ Participatory decision making

Mangochi	Cycle 1	100% of Mangochi District Hospital staff have not been appraised since 2016, contributing to poor service delivery	• Signing of DHMT Performance Agreement Forms • Brief Health Centre Advisory Committee and Health and Environmental Committee on Performance Appraisal System • Orient extended DHMT members on performance appraisal system • Development of extended DHMT work plans	Based on the MSI resumption meeting in July 2021, the Mangochi DHMT had not implemented any of the MSI activities.	• The MSI has built capacity of 27 members of staff (DHMT and heads of sections), and they have skills to conduct performance appraisals. So far, the process of conducting actual appraisals has started with all DHMT and extended DHMT members signing a performance agreement with their subordinates
Zomba	Cycle 1	80% of staff in Zomba had not been inducted since 2015, contributing to poor service delivery	• Signing of a Memorandum of Understanding (MoU) at sector level • Updating of existing sector database • Lobbying for creation of partners' database • Realigning partner activity with DIP (planning together) • Conduct full council meeting • Induction of staff • Integrated supportive supervision • Orientation of staff • Performance appraisal	Deadline for signing MoU set, MoU guidelines sent to all partners. Resistance by some partners, due to lack of knowledge that there is a policy for all partners to sign an MoU with DHMT. A DHMT orientation session took place, facilitated by a member from Mpemba Staff Development Institute. Thereafter, the DHMT embarked on performance appraisal but then got stuck because of lack of clarity on which forms to use (old versus new forms).	• The DHMT mobilised resources for COVID-19 and coordinated the district partners using the skills obtained from the MSI • The cost-neutral approach of the MSI led the DHMT to explore introducing a private section in the hospital to generate finances to implement its activities

6.What are the costs of the MSI?

The costing tool was planned to disaggregate costs for each cycle in each DG, including the breakdown by staff time and costs. However, the template file for data entry did not facilitate the disaggregation of all the individual cycles, therefore it was only possible to calculate an average of the total cycles. The disaggregation of the cycles affected by COVID-19 could not be explored within the dataset. However, it was clear that cycle 2 in DG1 was delayed for almost a year. Hence, all the costs that were incurred between the planned duration of the implementation period and the actual resumption time could be described as COVID-19 costs.

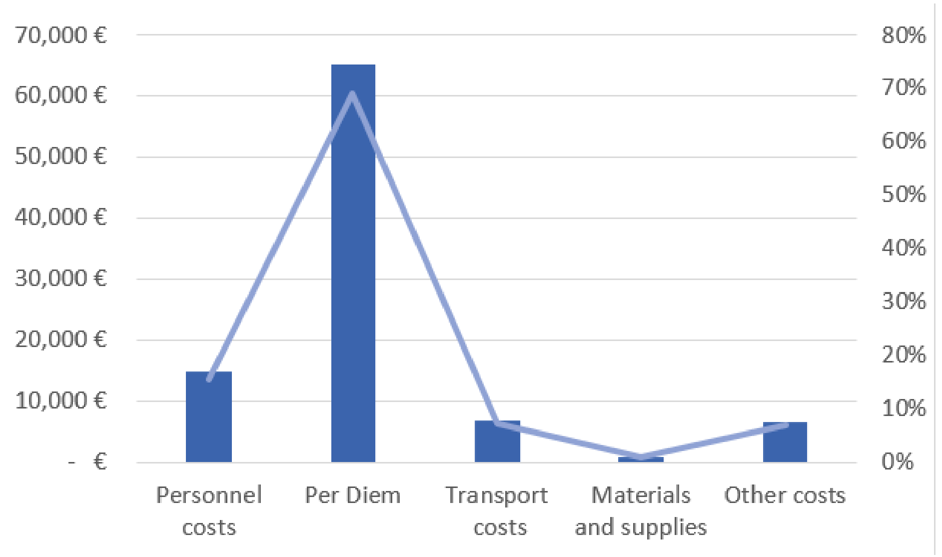
The aggregate project cost of the MSI was 94,278€. The highest cost line for MSI implementation was on per diems (69%) followed by personnel cost line which accounted for 16%. Below are summaries of the average cost data in € (table 7) and as % (figure 2) for the 5 cycles that have been implemented in Malawi.

Table 7: Summary of MSI average cycle cost by cost item € and %

Personnel costs	Per Diem	Transport costs	Materials and supplies	Other costs	Total
14,745 €	65,112 €	6,928 €	889 €	6,604 €	94,278 €
16%	69%	7%	1%	7%	100%

The cost-line for MSI implementation as presented as a percentage of the total cost is found in figure 2:

Figure 2: MSI average cycle cost by cost item € and %



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

Scale-up strategy: the implementation
PERFORM2Scale had planned for horizontal scale-up (the rolling out of similar action research cycles in other districts) and vertical scale-up (integration of the PERFORM2Scale model into the national agenda through policy, political, budgetary or other health system changes) approaches built within its implementation modality. To achieve successful scale-up, the initial thinking was that the CRT and RT would develop a scale-up strategy that would be submitted to the NSSG for approval, followed by the subsequent submission of the strategy by the NSSG to the highest decision-making body in the MoH called the Senior Management Team (SMT), a group of all directors and heads of departments in the MoH, headed by the Secretary for Health. It was envisaged that once the strategy was endorsed by the SMT, the Secretary for Health would take it up with the Office of the President and Cabinet through what is called the Cabinet Committee within the national-level health sector governance structure to have the strategy adopted by government. Then a launch of the strategy by the government would be held to register the adoption of the scale-up strategy for leadership and management strengthening initiatives in the country.

In October 2019, a preparation meeting was held between the CRT and RT to develop the scale-up plan beyond 2021. A number of issues were discussed and debated by the CRT and RT, resulting in mutual understanding on key approaches to the scaling-up process. These included a review of PERFORM2Scale progress and a comprehensive update to the NSSG. The update was important because the NSSG had not been in contact with DGs as much as the C/RT. It was important for the NSSG to be fed with correct and factual information because it is a committee with authority, the power to make decisions, and can give guidance on overcoming challenges to the implementation of PERFORM2Scale interventions. The CRT and RT developed a concept note on MSI implementation progress for referral to the NSSG in March 2020. Achieved milestones were highlighted, and the rationale for scaling up was outlined. The concept was presented to the NSSG on 20 March 2020 at Club Makokola in Mangochi.

Following the meeting with NSSG, the CRT and RT/QMD organised a meeting regarding how best to integrate the elements of the MSI into the QMD structures. An institutionalisation meeting was held in February 2021, with an aim of integrating the PERFORM2Scale initiative into the existing zonal quarterly DHMT review meetings. Resolutions from the meeting included the adaptation of the QMD's Integrated Supportive Supervision (ISS) tool where elements on human resources, health financing, health information, and gender from the PERFORM2Scale tools were incorporated, and an adaptation of the current zonal DHMT quarterly review meetings into the quarterly collaborative learning sessions, taking the form of the PERFORM2Scale inter-district meeting.

However, in the process of attempting to engage the NSSG, it became clear that interaction with the NSSG had been very limited and that the scale-up strategy was not explicitly communicated with the senior management within the MoH. Additionally, some NSSG members who belonged to the senior management team explained that there was no need to discuss the plans for the scale-up of the MSI at SMT level. They argued that the plans fit into the QMD structures and activities, and based on updates made during SMT meetings the senior management was in agreement. The view taken by some NSSG members was that this implied that QMD had a mandate to scale-up the MSI as part of the MoH Leadership and Management and quality improvement activities. QMD developed the Leadership and Management programme based on PERFORM2Scale structures, with a steering committee akin to the NSSG and a pool of coaches akin to the RT. Further to that, the selection of a small number of districts to train in Leadership and Management programme has echoed the

PERFORM2Scale formation of DGs. At this stage, the thinking was that the question of whether to have the scale-up strategy discussed in the SMT meeting and have an official process of seeking policy approval by the President had been rendered redundant.

It remains unclear at the moment how workshops 1 and 2 in PERFORM2Scale will be adapted into the DHMT quarterly review meetings because of funding. However, different options are being worked out by QMD on how best to adapt and integrate these important steps in ensuring management strengthening. For example, extra days might be added to the existing duration of the quarterly zonal DHMT meetings to cater for the incorporation of the two PERFORM2Scale workshops. Follow up meetings with QMD and NSSG are scheduled to clearly understand how far QMD has moved in actualising the adaptations so as to demonstrate the institutionalisation taking place in Malawi.

The NSSG set up
The setting up of the National Scale-up Steering Group was based on interest and the perceived relevance of directorates in the MoH and other directorates in other ministries. The Directorates of Planning and Policy Development and Human Resource as well as Clinical were selected in relation to their relevance to workforce in the MoH. The Clinical Directorate is responsible for placing DHSSs. In addition, the Human Resource Management and Development Directorate was considered for its overall guidance role on human resource management. The Ministry of Local Government and Rural Development was selected because it is the implementer of decentralisation in Malawi, such that the DHMTs are under the Council Secretariats which are headed by the District Commissioners. The QMD had openly shown interest in PERORM2Scale and so it became the hosting directorate and chair of the NSSG after the Clinical Directorate showed no zeal for the project. The HR Directorate is a common service department, meaning that they are officers who move from one ministry to another as shown in the table below. Such high mobility would only erode institutional memory of PERORM2Scale at the leadership level. The QMD leadership had been in the health system for many years and therefore had an adequate understanding of management and leadership challenges at the DHMT level.

Being political appointees, NSSG members move a lot from one department of the ministry to another. In the table below we show how the changes occurred. The most affected were the QMD and the Human Resource departments in the MoH as shown in table 8.

Table 8: Overview of NSSG stability

Directorate	2018	2019	2020	2021
QMD (**Chair**)	Dr Andrew Likaka	Dr Andrew Likaka	Malangizo Mbewe	Martias Joshua
DHRMD (OPC)	Louis Njaya	Louis Njaya	Louis Njaya	Louis Njaya
MoH Clinical directorate	Dr C Mwale	Dr Nedson Fosiko	Dr C Mwale	Dr C Mwale
MoH) Planning Directorate	Kate Langwe	Kate Langwe	Kate Langwe	Kate Langwe
Ministry of Local Government Services	Sphiwe Mauwa	Sphiwe Mauwa	Sphiwe Mauwa	Sphiwe Mauwa
MoH Human Resource directorate	Mrs. Tsakalaka	Dumisani Banda	Duff Msukwa	Duff Msukwa

The Resource Team

In setting up the RT a decision was made to recruit the members from relevant departments, as had been the case with the NSSG. The number was increased purposefully in order to form a 'pool' from which an adequate number should be available for engagement with the CRT. The RT consists of officers who are always pushed to fulfil their busy schedules. In the table below we show the incremental approach adopted, with some members added during implementation of the MSI. Compared to the NSSG, the RT has been more stable, thus maintaining institutional memory of the MSI and scale-up. Some of the RT members functioned as NSSG members at times, representing their bosses who were not often available for meetings and other PERFORM2Scale MSI and scale-up activities.

Table 9: Overview of the RT stability

Directorate	2018	2019	2020	2021
QMD (**Lead)**	Dr Bongani Chikwapulo	Dr Bongani Chikwapulo	Dr Bongani Chikwapulo	Dr Bongani Chikwapulo
QMD Zone (Central East)	Ruth Mwale	Ruth Mwale	Ruth Mwale	Ruth Mwale
QMD Zone (South East)	Alinafe Mangulenje	Alinafe Mangulenje	Alinafe Mangulenje	Alinafe Mangulenje
QMD Zone (North)	-	Owen Musopole	Owen Musopole	Owen Musopole
DHRMD (MoH)	Glenda Khangamwa	Glenda Khangamwa	Glenda Khangamwa	Glenda Khangamwa
MoH Human Resource Directorate	Jocelyn Masamba	Jocelyn Masamba	Jocelyn Masamba	
MoH Clinical Directorate	Dr Nedson Fosiko	-	-	-
Ministry of Local Government Services	Darwin Pangani	Darwin Pangani	Darwin Pangani	Darwin Pangani
Staff Development Institute	-	Peter Muthete	Peter Muthete	Peter Muthete
Zomba Central Hospital	-	Dr Martias Joshua	Dr Martias Joshua	-

The implementation of the scale-up strategy has not followed the blueprint that was established at the outset but rather has been responsive to emerging relationships among stakeholders. While it was envisaged that the vertical scale-up would be championed and executed by the principal secretaries of the MoH and Local Government together with the SMTs, reality has shown that the QMD is better placed to carry up the vertical scale-up with very little involvement of the senior management or the principal secretaries of the MoH and MoLRGDG.

This far, the SMT knows little about the scale-up strategy and no input can be expected from them at this moment. There has been little interaction between the NSSG and the senior management. While this would potentially lead to challenges in the implementation of the scale-up strategy, QMD has demonstrated that it has a mandate to scale-up the MSI as part of the MoH leadership and management and quality improvement activities. This can be supported by the way QMD has scaled up the MSI to 9 districts from the initial 3. The only thing needed would be to make progress updates in annual reports. However, one RT member indicated that there is a need to provide an update to the senior management in the MoLG. Another RT member indicated that just updating the SMT of the MoH on what has happened so far within PERFORM2Scale would be enough to seek their

(further) support. All these views support the idea that while the SMT may not have a say on the implementation of the scale-up strategy, they remain relevant and need to be updated on what is happening on the ground.

Table 10 shows how horizontal scale-up was achieved in the course of implementation of MSI cycles in Malawi:

Table 10: Horizontal scale-up - number of districts

District group	Implementation stage				#Districts	#MSI cycles
Project Year	PY2 - 2018	PY3 - 2019	PY4 -2020	PY5 - 2021		
DG1	MSI1	MSI2	MSI2 cont'd	MSI2 cont'd	3	2
DG2		MSI1	MSI 1 cont'd	MSI 1 cont'd	3	1
DG3				MSI1	3	1

Development of the scale-up strategy
The development of the scale-up strategy was done in 2020 with the overall target of covering a total of 20 districts within a five-year period. The engagement of relevant stakeholders was part of the development process, although it must be said that not many stakeholders were involved. The limited engagement of the stakeholders was mainly because the NSSG was not working optimally and was not meeting as a whole as required. Another factor was the high turnover of NSSG members. COVID-19 also meant that meetings were limited and at times banned altogether, limiting stakeholder engagement. The scale-up strategy was drafted by the RT and the CRT with the NSSG showing commitment to adopt the document. The development of the strategy considered emerging issues as the MSI was being implemented such that there are several modifications proposed in the strategy. These modifications were mainly to the MSI and also structural adjustments to assist with the scale-up. For example, the strategy proposed that the lengths of workshops 1 and 2 be extended from 2.5 days to 3.5 days to allow DHMTs to come up with better refined products, eg problem trees. The extension also gave time for the RTs to master the MSI and scale-up guidelines as presented by the CRT. This was in view of the failure of the DHMTs to meet as a whole group to finetune workshop outputs once they were back to their stations. The other modification was to do with the duration of the MSI cycle. While the DHMTs have been working on 8-month MSI cycles, the strategy proposed that the cycles be 12 months each to conform to government planning cycles. The district visits were prescribed at 2 visits in a cycle, but in Malawi the district visits were need-driven. We also introduced district visits by the NSSG (outside the PERFORM2Scale design) to meet DHMTs, with the aim to enhance ownership by MoH and MoLGRD. We included district commissioners and directors of planning and policy development from the councils during workshops. The NSSG and RT structures had prescribed numbers (5 and 3 respectively)whereas our NSSG had 6 members while the RT had 9 members to allow for adequate representation at all times.

There was also consideration of the structures to help with the scale-up. The facilitation of the MSI and its consequent scale-up has thus far been largely championed by the QMD, and as such the satellite offices of the QMD were proposed as hubs for the scale-up, with the quarterly review meetings of these offices accommodating both workshops 1 and 2 as well as the inter-district

meetings. This arrangement considers the financial aspects of holding the workshops; each DHMT funds itself to attend the quarterly review meetings and this arrangement means that there will be no need for extra external funding for the MSI-related sessions at the review meetings. This also ensures that the MSI is aligned to the government calendar year and DIP (12 months).

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

Facilitating factors of the scale-up of the MSI

The RT is generally well functioning and has expanded its role over time

All CRT members agreed that currently, the RT is generally well functioning. In the beginning of PERFORM2Scale and in 2019, when the first round of the process evaluation took place, the CRT invited the RT to the inter district meetings and the MSI workshops. From this time onwards, it was the RT that communicated with the districts, and this has put them in the driving seat. This was necessary because it was agreed between the CRT/RT/NSSG that PERFORM2Scale should not be introduced as a project, rather as an MoH programme. This would ensure ownership and sustainability because DHMTs would embrace it as a government initiative and not an NGO project that would be phased out someday. In DG3, the start-up and facilitation of workshops 1 and 2 were taken up by the RT, and the CRT took notes and contributed where they felt need.

The RT had been oriented by the CRT at the beginning of the MSI cycle 1. They were taken through the toolkit (Resource Team Meeting Report, 2019), copies of which were also distributed to all RT members. The use of the toolkit, including learning by observing/working with the CRT, enabled the RT to become motivated and they comfortably stepped into the shoes of the CRT. However, the CRT observed that during DG3 the RT rushed through the content more than in DG1 and 2, which was felt to be problematic. In addition, one CRT member reported that not all RT members had similar competencies and skills in running the workshops.

The CRT indicated that some members do not regularly attend RT meetings because of busy schedules or negligence. During the FGD with the RT, it also came to light that some RT members are not often attending RT meetings because of lack of funding to accommodate travel and attendance allowances, especially for those residing outside Lilongwe.

As mentioned above, the CRT gradually started to hand over responsibility to the RT for inviting DHMTs to the workshops and for facilitating these workshops. The same is true for the follow-up district meetings, which are undertaken jointly by the CRT and the RT but where the RT is in the driving seat, if possible. A CRT member also reported that adjustments in the MSI, as discussed above, were developed together with the RT. The RT became the “face of the project”, which enabled its implementation.

The CRT is a valued facilitator of the MSI and its scale-up

The additional governmental stakeholder who we interviewed during the semi-structured interviews commended REACH Trust as a flexible partner with whom the MoH had worked before. The CRT confirmed that they indeed learned to be flexible with deadlines and to accept DHMTs or RT members wanting to postpone meetings because of other competing priorities. They also reported that their previous experience working with the MoH helped in PERFORM2Scale, and in addition, personal relationships also helped in steering MSI implementation and scale-up. The latter refers to having studied together, having been together in other meetings, and having worked together when one or both were in other positions, which resulted in familiarity and trust between CRT members

and various RT and NSSG members. The MoH saw REACH Trust as collaborator and partner of the MoH. These findings are similar to those reported in the 2019 process evaluation.

All members of the CRT reported that they have learned how to think and work politically in this programme. Stakeholder mapping, reflection upon that and strategising further actions were regularly done. They also mentioned that the PERFORM2Scale webinars were good spaces for reflection on the scale-up of the MSI in Malawi.

Involvement of and coordination with key stakeholders

From the CRT's perspective, the QMD is the right department within the MoH to steer scale-up of the MSI, because they are passionate about leadership and management, and they have a link to the districts via the satellites. The CRT felt that QMD is highly convinced about the MSI and the need for scale-up, which was confirmed by the responses from other participants. Over the years, collaboration between the CRT and QMD (having a (driving) seat in the RT as well as the NSSG), has intensified. Already in the first round of data collection of the process evaluation, the CRT mentioned that PERFORM2Scale helped QMD to advance its leadership and management agenda. Furthermore, the CRT indicated that having an RT member from the MoLG has been instrumental for horizontal scale-up, because through him, new districts and their DCs are easily contacted. More official engagement with officials from MoLG began after the first round of the process evaluation identified this need.

Despite the challenges outlined above about different funders and different departments within the MoH, one additional governmental representative mentioned that the coordination of PERFORM2Scale with other actors, namely DFID, USAID, UNICEF, WHO and GIZ, has been instrumental in the process so far and remains instrumental for sustainable scale-up in the future. This is because these actors wield power and influence over the health sector and MoH, in particular through aid.

Champions of the MSI and its scale-up

In the FGD with the RT, some RT members felt that they were champions of the scale-up of the MSI. One NSSG representative also saw RT members as champions, and also included himself and the QMD as champions. Some RT and NSSG members were regarded as champions because of their passion, efforts to troubleshoot challenges and zeal to own the initiative. It was also said, in the RT FGD, that the former NSSG chair was a champion, but that "unfortunately, politics crept in", meaning that this director was transferred elsewhere after the new government was established in 2020. It was explained that this former NSSG chair could not be a champion for the MSI anymore: this would be too sensitive. This shows that director positions at central government level, although differently on paper, are positions that are highly influenced by politics. This finding echo what the ICA established at the outset of the PERFORM2Scale journey- that politics can influence the implementation and scale-up of programmes such as PERFORM2Scale. One of the DHSSs of DG1 was also indicated as champion by the RT, because the MSI was well run in this district. Therefore, he was believed to serve as an example for other districts at DHMT level. Despite several champions being identified in the first round of the process evaluation, no new champions emerged since.

Decision-makers: there seems to be political will

The chair of the NSSG explained that political will for improved leadership and management at district level is high. This is in line with 2019 process evaluation findings, about PERFORM2Scale being well aligned with existing policies. The Chair explained that during the official launch of the general leadership and management programme the new Minister of Health praised the project:

"She really commended us (QMD)… she mentioned that this is one (of) the areas she will also report to her colleagues in the cabinet ministers meeting, that one of her achievements … being a minister is this leadership programme and we are looking at it as a major political boost to us (QMD). That's why we really (are) making sure that we should be able to update through the Secretary for Health for the programme." (NSSG Member, Male)

The above quote shows that the Minister's interest encouraged the department. It might have provided confirmation of the mandate and need for QMD. However, the political will at the highest level in relation to improving leadership and management, as indicated above, has not (yet) translated into steering the scale-up of the MSI at senior management level within the MoH.

Monitoring of the scale-up

When asked about the monitoring of the scale-up of the MSI and whether this was informing the scale-up strategy, one RT member explained that this is hard to say (April 2021), because scale-up just started:

"A question is when do we say we have started to scale-up? I think the decision of scale-up in PERFORM2Scale has confused me from the time we started this programme. When it was just introduced to Malawi, they said this is scale-up... My thinking was that the implementation of the programme by the resources of PERFORM2Scale have seen (shows) that we have not yet started. Now the monitoring of the scale-up, so how are we going to monitor what we have not yet started...?" (RT Member, Male)

Other RT members indicated that their monitoring of the MSI in the districts informed the horizontal scale-up in other DGs. They, therefore, referred to the monitoring of the implementation of the MSI that informed scale-up:

"… because from DG1 to DG3 where we are now, we have gone through that process of monitoring … on our part we were able to learn to say the approach that we used for DG1, DG2 and DG3 was adjusted depending on how we saw the things have moved and what we have learned." (RT Member, Female)

The adjustments reported were related to the composition of DHMT members in the process and the more prominent involvement of staff from the District Council. On the latter, the CRT reported that representatives from the District Council have now been involved in inter-district meetings, as well as informing them about the programme in the District Execute Committee at district level. In addition, DPDs have been part of workshops 1 and 2. This was said to increase DHMTs' chance of getting funding for the activities planned for in their action research cycles. Lastly, the number of RT and NSSG members was increased in comparison with initial guidance from PERFORM2Scale.

Back to the monitoring of the scale-up of the MSI, the chair of the NSSG indicated that it still needs to be decided how this monitoring will take place (no milestones and indicators are included in the strategy yet):

"I think we still need to discuss some of key indicators to help use monitor the progress of the scale-up, I think in the concept we started working on, we need to further in some key indicators or some key activities that might be done to monitor the process." (RT Member, Male)

One CRT member reflected that by letting the political economy analysis (PEA) underpin the initial context analysis and the process evaluation actors were helped to better understand the context

which helped the CRT/RT to facilitate the process with confidence. In relation to the monitoring of costs of the MSI and its scale-up, in both the RT and CRT FGDs it appeared that the first report on the costs of the MSI was not shared with the RT and the NSSG.

Hindering factors to the scale-up of the MSI
The pandemic provided a challenge for the MSI. This challenge was not only faced by the DHMTs, but by the CRT and the RT as well. There were restrictions on meetings, there was staff shifting (at district level) and most of the programmes in the health sector suffered because much attention was now placed on the COVID-19 response.

Functionality of the NSSG
As indicated above, all participants believed that the NSSG contains the right people, however, all were aware that the group is not functioning well. This was prompted by most NSSG members not being up to date about the progress of PERFORM2Scale, as well as their limited role in steering the vertical scale-up. This seems to be a result of a lack of engagement with the NSSG by the RT and CRT (while the need for this was stressed by participants in the first round of the process evaluation)[1], but also the lack of engagement from various NSSG members when they are invited for meetings. An RT member summarised it at follows:

> *"... on the senior leaders, particularly the NSSG (the directors), I have not really seen the support from that structure except may be from the Director of Quality. But now working together with directors and seeing that we are having that support is not there and that could be the result of our engagement with them. However, there have also been some cases where engagement has been done and then some offices are not there and if they are not there, you don't know which side they are."* (RT Member, Male)

The current NSSG chair who started in 2020 following the transfer of the previous chair, confirmed that the group should meet more often, either face-to-face or virtually, to share progress and provide guidance to the programme. He confirmed that since he started his position as QMD director, there had not been any NSSG meeting. From before his time, when NSSG meetings did take place, one RT member confirmed that some members failed to join these meetings regularly:

> *"In terms of NSSG engagement of the individual directors, it has not been as routine or regular as expected. Also, even if the leaders are meeting, there are certain offices that are always there and there are other offices that will miss at those meetings and reasons for not being available are not sounding."* (RT Member, Male)

This quote indicates that certain departments see participation in the NSSG as not important enough for them. It also indirectly shows that participation of and cooperation between different departments within the MoH and between ministries is not optimal. Despite the NSSG innovation, there was passive participation of some directorates in the MSI scale-up advocacy due to, among other factors, unhealthy relations, power play and attrition. More needs to be done if the setup of the NSSG is to bear fruit beyond the life span of PERFORM2Scale. It should be noted though, that whilst participation of the NSSG has not been optimal, commendable strides have been achieved in the scale-up (institutionalisation) of the MSI.

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[1] The COVID-19 pandemic could have resulted in less engagement because of competing priorities of NSSG members. In the first round of data collection of the process evaluation it was said that a WhatsApp group with NSSG members was established to provide updates. It seems that this WhatsApp group is not used at the moment.

As discussed above, some NSSG members sent their deputy directors, who are often also RT members, to NSSG meetings in their place. This led to the deputies taking on the roles and tasks of both an RT and an NSSG member. In addition, it seems that reporting on what transpired in NSSG meetings back to director level did not take place. One other NSSG member who we spoke to confirmed that she had "minimal participation" in the programme, but that she was convinced about the value of the MSI. The interview did not reveal why her participation was so minimal, besides having competing priorities. On the question of whether the NSSG was regarded as a team, an RT member thought that this was not the case because they seldom meet.

Another RT member added that the NSSG is an unofficial structure in the MoH, and as such not recognised and not officially reporting to the senior management. He was of the opinion that the NSSG should engage more with the senior management and the Secretary for Health, because the NSSG represents just a subset of the senior management. The establishment of the new government and new staff filling key positions in various directorates, including the Secretary for Health, made it unclear, to this RT member, whether senior management is aware about PERFORM2Scale. He explained:

> *"But with the previous PS Dr B, he had a good rapport with Dr C (previous NSSG chair) and this thing could have been easily bought[2]. I am not sure with the current Secretary for Health of the Ministry of Health; hence we (RT) need to gear ourselves up on how to approach the current one so as to convince them."* (RT Member, Male)

There seemed to be different views on this within the RT, because another member thought that just an update on PERFORM2Scale to the senior management would be enough to get support from the higher level.

DHMTs not convinced enough about the MSI to ensure its routine implementation without support
In relation to what evidence convinced DHMTs about the value of the MSI, the RT reported that this was mainly based on shared experiences from other districts, which are presented in the inter-district meetings. In the same RT FGD, all but one of the members agreed that DHMTs are convinced about the value of the MSI, although this took some time:

> *"Most of the players are really convinced about the value of MSI, but maybe we would have few people who are still not sure. Basically not because of the evidence, but maybe because it's one of the programmes that come with cost-neutral approach. So, it's quite challenging for the districts because for them when it is a new programme it comes with funding, so for the first time now they had to experience this programme and for others it wasn't that easy. But with time I think they have seen the value of how this simple programme can really solve their day-to-day problems, maybe they had problems for some time and they had no mechanism or strategies to solve those problems and with MSI they were able to tackle some of the problems."* (CRT Reflection)

One RT member doubted whether all DHMTs were convinced about the MSI, because she observed that some DHMT members still indicate that they have no resources to implement the MSI and that "partners don't do this and that". This was confirmed by our MSI interviews, and it shows that indeed, the district level still often expects additional funding for relatively new initiatives and programmes. This is also based on the questions the CRT and RT received during orientation visits to both the DHMTs and the council where they were not comfortable with the cost-neutral nature of

[2] This was also noted by several participants in the 2019 process evaluation (that the former QMD director has a good rapport with/ could influence the former Secretary for Health).

the project. In round 1 of the process evaluation, DHMTs seemed more positive about the cost-neutral approach of PERFORM2Scale than in round 2.

One CRT member said that at the beginning of PERFORM2Scale, DHMTs were more engaged than now.

> *"I just want to touch on the DHMTs on how they have evolved overtime. I think the observation that I can share here is that they are more enthusiastic at the beginning but as time goes, they are always looking for spoon feeding."* (CRT Reflection)

Another CRT member explained that this attitude did not come from disinterest or not acknowledging the value of the MSI, but rather the multitude of partners that visit them. A DHMT member in the 2019 process evaluation mentioned this as well. This shows that follow-up with DHMTs remains instrumental.

Continuous follow up with DHMT was also stressed in the RT FGD. It was said that in future, the satellite offices would need funding to be able to make quarterly visits to the districts to assist then with the MSI.

> *"I think we are well aware that the district needs reminding and the same response that we (the RT) have been reminded is what we get from the facilities when we go for the visitation. This is the reality on the ground and the districts really need to be reminded."* (CRT Reflection)

This viewpoint was confirmed by many district-level participants, who told the research team conducting the interviews that they 'were reminded about the MSI' with their coming. The RT furthermore revealed that people at lower levels than the DHMT (health centres and communities) have not been reached by PERFORM2Scale and thus are not convinced about the value of the MSI.

Decentralisation: lack of clarity around changing roles and overlapping mandates

In both the first and second rounds of the process evaluation, the MSI was seen to fit within the context of decentralisation, because of the (at least on paper) DHMTs' increasing decision space. However, our interview with an additional governmental stakeholder in 2021 revealed that decentralisation is a potential hindering factor to the scale-up of the MSI. Decentralisation made the DHMTs' annual planning process (the development and implementation of the district implementation plan (DIP)) no longer a responsibility of the MoH, but the MoLG, through the National Local Financing Committee and the District Councils (of which DHMTs are part). As a result, using the MSI in the DIP process is possible, but the MoH, through its QMD satellite offices, only has a technical advisory role. The process undertaken in the DIP (a single 5-day training) is different from the action research cycle approach used in PERFORM2Scale, despite the fact that the bottleneck analysis used in DIP is similar to the problem tree analysis. Membership of the DIP taskforce does not include MoLG, while the PERFORM2Scale initiative has been fully co-implemented with MoLG. The MoH cannot ensure implementation of the MSI via the DIP process, and the MSI is not being officially integrated in guidance related to the DIP process.

The above was confirmed in the RT FGD. One of the RT members and an NSSG member explained that it would be instrumental to invite District Commissioners (DCs) and Directors of Planning Department (DPDs) to the quarterly review meetings organized by the satellite. As one RT member put it:

"So, when we are engaging the DHMT (in the satellite meetings), the DC and the DPD have to be there, because some of the issues that we discuss pertaining to the health sector, for them to change, will require the movements of these offices… Because of decentralisation we (MoH) don't have power over these people, we cannot like fire them, but those meetings are more of technical discussion like 'how are you improving malaria' and what would we do and then we go back; but it is the DC who can now fire those who are not performing." (RT Member, Female)

The RT representative from the MoLG confirmed the above and said:

"Whatever the MoH is doing is about capacity building and they are emphasizing health technical services to ensure that those people delivering health services they have got right technical competencies and we don't have problem with that". (RT Member, Male)

The HR representative in the RT added that for recruitment of health personnel, budgets are also directed to the District Council, although the budget is earmarked for health. The RT acknowledged that the different roles of MoH, MoLG and District Councils are not yet clear to everybody at district level. While there was no explicit mention that this could hinder scale-up of the MSI, confusion about roles, especially that of the satellite offices, could be a hindering factor, as the MSI is related to leadership, management and HR, which is officially under the responsibility of the MoLG. However, the outcomes of the workplan in the MSI could include an improved malaria response (also an MoH programme), as indicated by the RT member cited above.

Historical unpopularity of and resistance to satellite/ zonal offices

In relation to the above, a CRT member reported how in the past and still today, satellite offices have been unpopular. He talked about the controversy around and resistance to the structure in general. He said:

"In some zones, the satellite officers are accepted and they are of course working with the District Council, while in some zones the satellite officers are being ignored." (CRT Reflection)

He furthermore explained that the QMD tries to increase the visibility of the satellite offices by bringing in development partners that work through these offices.

"… the more they come with partners and they are always introducing themselves that they are from the satellite, this is giving them more visibility and this takes some of the resistance away. This is how the QMD is maneuvering." (CRT Reflection)

The QMD representative in the RT FGD recognised what some of the district-level respondents reported: they were unclear about the mandate of the satellites, and they reported that there had not been any quarterly review meetings for a long time. The QMD representative of the NSSG confirmed this as well and explained that they have started reviving the structure, including clear communication about this to the districts. Another reason for DHMTs to question the position of the satellite was that satellite officers had a lower grade than some of the DHMT members, as mentioned by two DHSSs we spoke to. One of the DHSSs said:

"You find that it's very difficult for them (satellite officers) to do the job because of seniority and also (because of some un-clarity in their mandate. Because technically, of course, it's debatable what we need the QMD for?" (DHMT Member, District3, Male)

It is important to note that the satellite offices stem from the previous zonal offices, which fell under the Department of Planning in the MoH. When the new QMD was established, the zonal offices were

renamed as satellite offices and fell under QMD. Currently, the QMD is, as expressed by a QMD representative, the only department with more direct links to the districts:

> *"In essence, we would say as the Ministry the only office that has got direct links with the districts is QMD. While all the other departments if they want to link through the districts, they will still liaise with us (QMD) our department to support the district, it also plays as a coordination department because quality is cross cutting in all the areas."* (RT Member, Male)

This indirectly reveals a pain point: the cross-cutting nature of QMD is being questioned by some MoH officials as, according to them, quality related to clinical services or planning is still the mandate of the respective departments, and not of QMD.

Limited and earmarked funding
One CRT member mentioned that satellite offices are understaffed, but that he got the impression that other departments in the MoH have interest to using the satellite offices as well. This might provide an opportunity to strengthen the satellites in the future. Another CRT member indicated that QMD tried to involve other departments in the satellite structure, but this has so far not resulted in any more support. One of the RT members (QMD representative) confirmed:

> *"Of course, we had a discussion with the satellites and to say if they can factor in into their budget that is 30% may be one meeting for the coming financial year. And also, we are in the process may be to negotiate with the directors to see if they can pump something into their budgets though not promising. We are also considering other partners if they can consider funding a zonal meeting though it's difficult. So, we are actually considering all those modalities."* (RT Member, Male)

The same RT member also pointed out that the dependency on development partners often comes with restrictions about what the funding is used for:

> *"Now the funding in Malawi that goes to the health sector, 30% comes from the government and 70% is from partners. So, if you go to the districts, you will find that the 30% goes to operation, ie to pay water bills etc, and they have nothing left for holding the meetings and capacity buildings. So, the trend is the same even at the zonal level, because ideally the zonal level is supposed to fund the meetings bringing the districts together. So, the issue is resources, this plan (for scale-up) is zero if we are not able to mobilise the resources within the 70%, because the 30% is almost done with operations. So, the question would be, how do we maximize the 70% so that it is funding the zone? You will find that maybe you have a partner, may be USAID has held a meeting at the zone and they are just pushing one agenda and then you have got maybe GIZ, and they have also held a meeting there as well and also pushing one agenda. So how can we (as Malawi government) put the resources from USAID and GIZ and hold a zonal meeting where you have the agenda for USAID and GIZ and also the zone will have an agenda that is in its interest, and obviously that is leadership. So, if you happen to interview us after a year and then we say we didn't have the zonal meetings and presentations, the bigger issue will be resources and we have to find a way how to maximize the 70% to ensure that we are implementing this."* (RT Member, Male)

The above reveals a lack of partner/donor alignment and a potential lack of leadership at government level to align different initiatives and funding streams. This RT member hoped that in

future, partners would pool their funding again[3], so that the priorities of the Government of Malawi and integration of different programmes could direct the agenda.

In relation to capacity of the satellite offices and their quarterly review meetings, the offices currently have three to four staff members, and funding for quarterly review meetings is envisioned to partly come from DHMTs and partly from development partners. Ensuring this funding and making the review meetings happen could be problematic, and could as such be hindering the scale-up of the MSI. QMD is currently trying to ensure funding from other partners. Therefore, as mentioned by a CRT member, it is instrumental that other development partners are convinced about the PERFORM2Scale MSI at this moment. In short, the current implementers are convinced, but the future funders need to get convinced. All participants believe that scale-up In the Malawi setting is dependent on external funding. One RT member, in this regard, pleaded with REACH Trust to support the horizontal scale-up more than intended:

> *"Please take the advocacy role of continuing supporting this programme beyond what was done, because we have got more than 28 districts and we have done only 6 districts; and then to think that we can do the others engaging the political leadership and the PSs but take us at least to 12 or 15 councils such that the other 50% maybe we can be able to carry it out."* (RT Member, Male)

The RT member requested the CRT to work together with the RT on a concept note that they could use to approach other donors for funding.

The representative from UNICEF, on the question what is needed for sustainable scale-up, answered:

> *"It depends how we define sustainable as well. If sustainable means the government of Malawi is going to manage the whole show, I doubt we are going to; I mean just based on numbers, yeah if you look at the amount of money that is there for the Ministry of Health and how they are spending the resources, it's not enough."* (UN official, Male)

He thought that financial sustainability is not possible in the near future, but using the available resources more efficiently should be the focus. One RT member said:

> *"Maybe the political will could be there, but the main challenge could be the financial support, because without PERFORM2Scale I think if we don't find another donor it will be very difficult to move forward because the district budget is not enough."* (RT Member, Female)

Funding from partners causing rivalry between MoH departments

Funding from development partners seems to be attached to various departments of the MoH, which partly explains the rivalry between the different departments. Support to the DIP process, despite it being under official responsibility of the MoLG, is provided by UNICEF – through CHAI – to the Department of Planning of the MoH[4]. This funding cannot be used by QMD. UNICEF also funds the leadership and management programme of the MoH, which falls directly under QMD. This programme and its funding are much smaller and there is no expectation, as expressed by a CRT

[3] In Malawi, many donors and partners stopped the pooling of funding as a response to huge corruption scandals in 2013.

[4] The funding from UNICEF comes from the Bill and Melinda Gates Foundation who, it was reported, mainly work with CHAI.

member, that UNICEF funding could assist in scaling up the MSI though the satellite offices. Above, we also discussed the cross-cutting nature of QMD being questioned by some MoH officials from other MoH departments. This is also related to rivalry, as the establishment of QMD in 2014 could have caused more competition between departments in attracting donors (to their department) for quality improvement programmes and activities in relation to clinical, nursing, preventative and other sections of the health system. Already in the 2019 process evaluation, one RT said that they found it remarkable that PERFORM2Scale was under QMD and not under the clinical or planning department.

Changes in leadership

The additional governmental stakeholder also explained that after the change in government in Malawi in 2020, many people at key positions at national and district levels changed. This necessitates orientation on PERFORM2Scale to ensure that scale-up is not distorted.

> *"I think our challenge with the change of government in Malawi, that has an implication, because there are lots of movements. The DCs are not there[5], principal secretaries, directors, there has been a lot of disruption on leadership. Mostly you may find new leadership and they may be people that don't know about the programme. So, I think moving forward it is important to mitigate that problem, probably widen the scope of capacity building so that many people should be trained, probably an awareness of some sort so that the new people who are coming they should not be like they are starting again, the turnover has really been a problem."* (Government representative, Male)

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

The aggregate project cost for scale-up per cycle was 11,726€. Just like the MSI implementation, per diem was the highest cost line accounting for 32%, followed by personnel costs which accounted for 28%. On the activity cost line, the highest cost line was incurred on other stakeholder meetings followed by NSSG meetings.

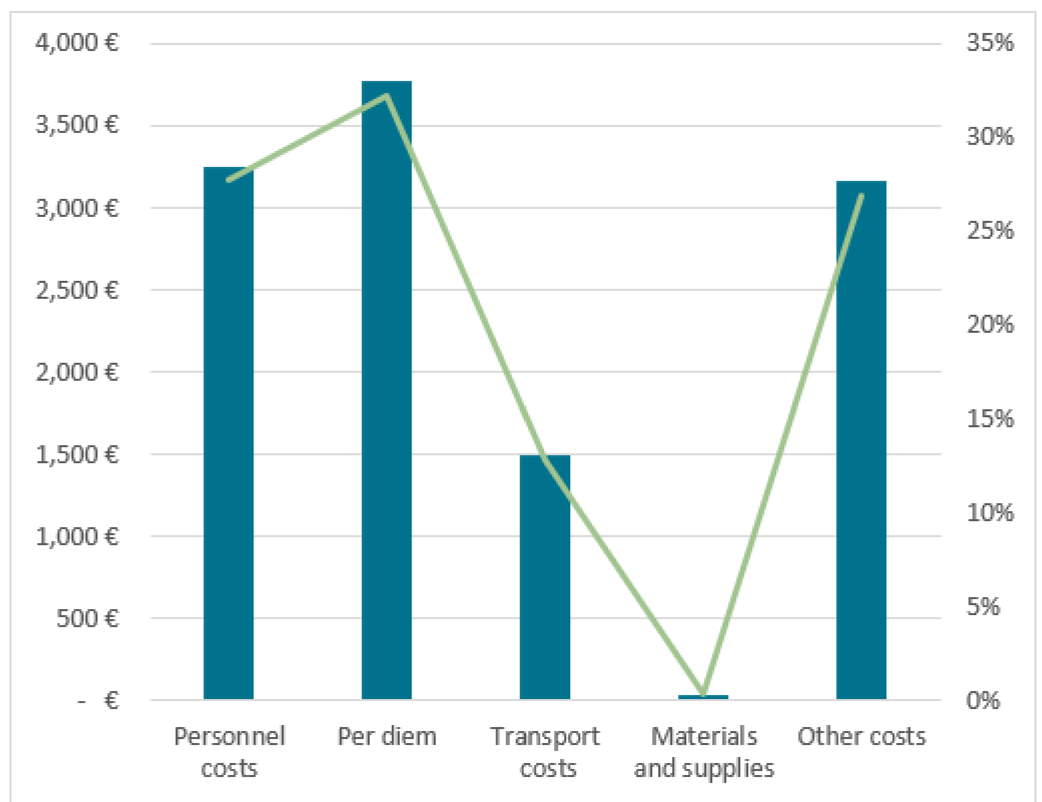
Below are summaries of the average cycle cost data in € in Table 11 and Figure 3.

Table 11: Scale-up average cycle cost by cost item € and %

Personnel costs	Per diem	Transport costs	Materials and supplies	Other costs	Total
3,251 €	3,776 €	1,501 €	39 €	3,160 €	11,726 €
28%	32%	13%	0%	27%	100%

[5] At the time of data collection, all DCs were suspended nationwide, because of investigations into corruption around COVID-19 funding. The new government in Malawi, that took power in 2020, states that fighting corruption is one of its main goals.

Figure 3: Scale-up average cycle cost by cost item € and %



We can conclude from all cycles that the intervention costs are on average about 106,004€ per cycle. Given that each DG comprises 3 districts, each cycle costs about 35,000€ per district. This is likely to compare favourably to other management strengthening interventions in the public health sector in Africa. The bulk of expenditure relates to direct staffing costs (17%) and per diems (65%) with other costs being rather minor.

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

What are the collective effects of MSI (multiple cycles) on management competence, workforce performance and service delivery?
The degree to which the collective effects of the MSI can be observed on management competence, workforce performance and service delivery vary across the districts. As outlined in detail in Research Question 5 and in the appendices of each district case study, a core number of collective effects are common across the districts including enhanced teamwork, realisation of decision space, and work planning

Teamwork
All districts reported the enhancement of teamwork among the DHMT members. They plan together, analyse problems together and execute the plans as a team. There has been increased communication amongst the DHMT members which makes coordination of their work easier. In some DHMTs, opening up to give contrary ideas was a problem but the MSI has provided that space for free discussions . The overall confidence of teams has been built because of the collaborative planning and consultations.

Realisation of their decision-making space

The MSI has also awakened the DHMTs to the decision space that they have as health managers in the districts. Previously they could not make decisions on some issues, believing they were decisions to be made and implemented by the central level managers. Through their interaction with the RTs and NSSG from QMD and the MoLG, the DHMTs have realised that some issues are within their mandate and have since started acting on such issues. The two examples above also demonstrate that having taken on the responsibility for these problems, they are able to investigate more to identify the root causes of the problems. From the case studies, one DHMT member was quoted as follows:

> *"Initially we regarded supervision as a routine thing but now we are being focused and making sure that people are given responsibilities to respond to matters arising from the supervision visits. We see that most of the issues that we were not responding to were actually within our sphere of control and we are now responding. For example, at X health centre, the DNO rectified a problem of many weighing scales that the facility had just dumped thinking they were unusable".* (DHMT Member, District 9, Male)

Being responsive to issues helped the DHMT achieve some unintended effects, including a realisation that they can make critical decisions on long-term recurring problems, as revealed by the integrated supportive supervision . For example, during a supportive visit, the RT/CRT learnt that the DHMT had engaged a water association in the district to ensure health facilities have access to portable water as evidenced by the quote:

> *"Some facilities, such as Y and Z, are very old and dilapidated structures. They expect a lot from the DHMT, and it is not easy to attend to all issues. Fortunately, at X a project to supply running water is underway, that's something that they have been troubling us with for a very long time. As DHMT we are engaging xxx water association to provide water in facilities, thanks to PERFORM2Scale".* (DHMT Member, District 9, Male)

Work planning

Another effect emerging across the districts is the issue of work planning. While this is a requirement for the officers, it appears that it was neglected and the coming of the MSI has revamped work planning and its monitoring to ensure the plans have been executed. This also requires that supervision is done and, in a way, this translates into improved service delivery.

> *"I know how to plan my activities and those activities can be like assessed by; because we do what we call; we have the programme where we have our own indictors where we can be assessed on, yeah, our performance that is. Now I have improved, for example I have an objective on working on improving media relationship*" (DHMT Member, District 2, Male)

Strengthening entrepreneurial spirit

The in-depth analysis of problems has also taught the DHMTs that for some of their problems they do not necessarily need to wait for partners to help. They can solve some of the problems using their own decisions and resources. For example, in Dowa by prioritising their resources the DHMT managed to open a health centre at Matekenya which has been closed for almost 13 years, simply because they waited for the ministry to do it for them. Also, using their own resources, Dowa DHMT was able to address a long-standing problem of theatre equipment that had been waiting to be repaired by the MoH for more than 5 years(CRT/RT supportive supervision report, 2020) .

Transfer of skills to new districts
Others were also of the view that what is being implemented under the MSI are actually core duties of the DHMT, and that the coming of PERFORM2Scale was just a reminder of what should ideally be done. DHMT members were also capacitated and can apply what they have learnt in other districts when transferred. However, the project design was unable to track how capacitated members of the DHMT were cascading the skills once they were transferred or posted out to non-PERFORM2Scale districts.

Has the MSI been embedded in DHMTs' ways of working?
The MSI has not yet become an integrated part of the working culture for the participating DHMTs, but it must be mentioned that DHMTs have integrated distinct skillsets which they have learned through the MSI, into their working routine. For example, there was faster ownership of the MSI in DG2 districts than DG1. This was because of the involvement of NSSG members in introducing PERFORM2Scale in DG2, an activity not conducted in DG1. Fewer problems were encountered in DG2 than in DG1 because the lessons learnt from DG1 cycle 1 were implemented in DG2.

As described in detail under Research Questions 4 and 5, there is improved planning, which includes problem identification and analysis, prioritisation and also enhanced communication among the DHMT members. Another aspect worth mentioning is the fact that DHMTs now monitor their work to see if they are achieving their plans. While these are routine things that they should have been doing previously, their participation in the PERFORM2Scale MSI has helped to strengthen DHMTs' capacity to more effectively attend to and perform the core functions and duties of their role.

Are other sectors interested in using MSI?
Although interest was shown by a district council in DG1 to use the MSI in other sectors, so far there is no evidence that other sectors have adopted the MSI. This might be due to the fact that even within the DHMTs, the MSI has not been fully integrated, and work remains to convince all stakeholders that it is a valuable and effective intervention which improves the management skillset of DHMTs and in turn improves workforce performance and service delivery. Nevertheless, there has been some evidence of cross-sector involvement during the implementation of the MSI, namely the involvement of the district councils in many of the MSI activities. The strategic early involvement of the district councils was perceived to subsequently facilitate the DHMTs' lobbying efforts to the council when seeking support for their MSI activities. While other sectors are not using the MSI themselves, through their involvement the first step of familiarising other sectors to the MSI has been somewhat established.

To what extent, if any, has scale-up been institutionalised?
The institutionalisation of the scale-up in Malawi has taken great strides although it would be too early to say it has already happened. The political will for the scale-up and the capacity of the NSSG and the RT to propel the scale-up has been well highlighted in the process evaluation narratives outlined under Research Questions 7 and 8. Within the NSSG and the RT, there are champions who are committed to achieving the institutionalisation of the MSI and in this vein a concrete plan for the scale-up is in place. The plan takes into account that one of the core challenges to scale-up is securing the finances to fund the MSI workshops (process evaluation report, 2021). The plan has been made in such a way that the scale-up will utilise existing structures of the satellite offices which hold quarterly meetings funded by the DHMTs, and therefore no extra funding for the PERFORM2Scale MSI is required. Facilitation of the workshops will be done by satellite/zonal officers in collaboration with the RTs. Other modalities for the institutionalisation are explained in the table below:

Table 12: Overview of the status of the scale-up process

Elements of the MSI	How they are/will be scaled	Status
Steering implementation of MSI (by CRT and RT)	Steering of MSI by satellite officers	Future plan, cost-neutral
Selection of districts (by NSSG)	Selection of districts by leadership and management steering committee (a replica of the NSSG)	Future plan, cost-neutral
District situation analysis (by DHMTs)	Will be conducted (by DHMTs) using the (new) integrated supportive supervision tool	New MoH tool with elements from PERFORM2Scale incorporated available
Workshop 1 (plan - problem analysis, facilitated by RT)	Workshop 1, facilitated by satellite office with assistance from RT	Pending on acquisition of funding/ option to integrate this in a quarterly satellite meeting
Workshop 2 (plan - development of work plan, facilitated by RT)	Workshop 2, facilitated by satellite office with assistance from RT	Pending on acquisition of funding
Implementation period (act, observe, reflect, follow-up visits by RT/CRT)	Will be done through reporting and reflecting during quarterly satellite meetings and mentoring by satellite officers; meetings will be attended by selected staff from District Council	Future plan, cost neutral although in some satellites meetings do not regularly take place because of funding gaps
NA	Integration of some PERFORM2Scale elements in leadership and management course for DHMTs eg adaptation of the reflection tool to "emotional intelligence module", adaptation of the RT structure into "mentors and coaches", adaptation of the NSSG structure into the "Leadership and Management steering committee"	Done. Course will need to be rolled out over all districts, funding pending

Application of the MSI on addressing problems of COVID-19?
While the MSI would have been a big asset in the fight against COVID-19, reality indicates that the DHMTs did not plan their COVID-19 activities around the PERFORM2Scale MSI.

Discussion

MSI implementation and outcomes: what worked, what did not work, and why?

Most of the DHMT members in the implementation districts assumed their roles as managers without previous management experience or managerial training. This was well evidenced in the management competency survey that was conducted prior to MSI implementation. In a decentralised context, where there is limited management training such as Malawi, the MSI has proven an effective strategy to strengthen key management competencies at both individual and team levels, including problem identification, communication, analysis, problem solving, and teamwork. This improvement in management competencies was reported by many DHMT members over the course of PERFORM2Scale and it is evidenced in the process and outcome evaluations, as well as other surveys utilised during PERFORM2Scale.

The practical approach of the MSI was well adopted and accepted by DHMTs in all districts. The approach was hailed as a success because of its hands-on approach, which was unlike other management strengthening interventions they had seen or heard of prior to PERFORM2Scale. Such a pragmatic approach to solving problems promoted higher levels of acceptability and enthusiasm among the DHMTs. Furthermore, ownership of the MSI has been demonstrated by the MoH in that the RTs quickly developed and strengthened their capacity to facilitate the MSI. The RT is now leading on the MSI implementation while the leadership and management steering committee would be in the driving seat of the scale-up. The active involvement of a skilled, invested and empowered RT has contributed to the horizontal scale-up through active and supportive leadership and networking, enabling the MSI to transcend multiple layers of the health system. That said, there is little evidence to suggest that the MSI trickled down below DHMT level.

While these are noteworthy milestones, there were also challenges that derailed the implementation of the MSI. Staff turnover/transfers reduced the DHMT teams' ability to effectively implement the MSI. Added to this, COVID-19 slowed progress such that while some DHMTs were able to carry out the MSI on their own, other DHMTS expressed the need for external facilitation and support to move forward. The latter, unfortunately, did not get the mentorship they needed due to COVID-19 restrictions, which limited interaction between both the RTs and CRT and the DHMTs.

Scale-up: what worked and what did not work and why?

At the beginning of PERFORM2Scale, it was difficult to recruit individuals to set up the NSSG, negatively impacting on the timeline of PERFORM2Scale. Unlike Ghana and Uganda, this was the first time that the MSI was being introduced to Malawi, and people needed some time to be convinced of its value. Once the NSSG was finally established, it did not function optimally, seemingly because of inter-departmental power plays within the MoH. By design, PERFORM2Scale encourages interdisciplinary collaboration across governmental departments, especially between the MoH and the MoLG, which includes encouraged interactions between the DHMTs and the DC. The inter- and intra-departmental power dynamics limited the degree to which the NSSG and RT worked effectively together, and, in turn, the degree to which scale-up was facilitated. PERFORM2Scale was particularly promoted by the QMD. As a relatively new directorate striving to make its impact felt by introducing its own agenda, supporting PERFORM2Scale was therefore an opportunity for the QMD to support an approach well-suited to the agenda of quality service provision. There was, however, a power play between QMD and other departments in the MoH in terms of mandate and relationships with donors, which impacted on progress with the scale-up process.

The development of the scale-up strategy was productive, mostly due to the leadership role of QMD and the RT. This was a good development as QMD was better placed to guide progress because quality improvement tools (5 in total including the problem tree analysis which PERFORM2Scale brought to the fore), meant that PERFORM2Scale aligned to existing policy and governance

structures. QMD's drive led to the integration of parts of the PERFORM2Scale situation analysis tool in the nation-wide Integrated Supportive Supervision (ISS) tool, as a major and sustainable scale-up step. Another positive example in the scale-up process was the planned involvement of satellite officers and the RTs, as part of future plans for scale-up. There is a concern however, that the current state of ambiguity around the decentralisation process in Malawi has resulted in a lack of clarity around existing structures (including that of the satellites), roles and responsibilities, and the mandate between MoH and MoLG, as well as national and district level, all of which may impact on the MSI scale-up. Taken together, the potential for scale-up is great, but its success will largely depend on the mitigation of the obstacles highlighted.

Lessons of scale-up

The setting up of the NSSG and RT had a positive influence on the scale-up of the MSI in Malawi, in line with ownership of the programme. These structures played and continue to play a pivotal role in bringing together the partners needed for driving scale-up. Without these structures the scale-up process would have been very difficult.

Sustainability of the horizontal and vertical scale-up required a context responsive approach, which integrated the MSI into existing work systems, management structures and planning cycles. This integration was seen through the quarterly review meetings coordinated by QMD satellite offices. Sustainability of the MSI and its scale-up, therefore, requires financial resources from the MoH, which unfortunately is heavily dependent on the support of international development partners/donors. Given that the agenda for health systems strengthening in Malawi is dominated by powerful donors, it has proven difficult for PERFORM2Scale to garner the interest and work together with other donors and development partners in the field. This may be attributed to PERFORM2Scale's limited resources within a challenging and competitive environment, where different stakeholders have their own agendas to push. Moreover, it has become clear that scale-up of the MSI would require the involvement of a wide range of relevant stakeholders; be it those who have been involved in the MSI to date or those to be identified as relevant to MSI and its scale-up. For example, because of the high attrition and staff turnover rates, there is need for more actors to be involved in the MSI implementation and scale-up from the MoLG to widen the pool of champions for the MSI scale-up.

Recommendations for supporting the scale-up strategy

The scale-up strategy is developed and supported by senior MoH management, but its implementation will depend upon the effectiveness of the integration of the MSI workshops in the satellite structure and review meetings, and on getting enough (financial) support to make this happen. Financial support from external donors could contribute to a successful scale-up. Going forward, the NSSG and the RT need to intensify engagement of partners/donors for purposes of financing the extra 2 days added to the quarterly zonal review meetings. Implementation of the scale-up strategy will also be dependent upon the functionality and acceptability of QMD satellite offices. At present, though the satellite offices are functional, there remains uncertainty over the future of the offices because of the power play (between QMD and department of planning in MoH) related to these offices. There is a need to clarify roles and responsibilities of satellite offices towards DHMTs and other sectors.

In terms of institutionalising PERFORM2Scale through the DIP route, the DIP taskforce comprises INGOs including Clinton Health Access Initiative (CHAI), UNICEF, the directorates of Planning and Reproductive Health in the MoH, QMD, MSH, and REACH Trust. It does not include the MoLG. Institutionalising PERFORM2Scale into the DIP process will mean taking a completely different route because the DIP process is a one-off, five-day training programme, unlike the action research cycle approach used in PERFORM2Scale. Also, the DIP process is more donor-driven than a MoH-driven initiative, and as such there is palpable tension over ownership, even before the PERFORM2Scale can be said to have been institutionalised within the DIP process.

Limitations on implementation and research

There were limitations in the implementation of the MSI and its corresponding research. To begin with, the implementing districts had challenges executing the MSI workplans and strategies due to funding problems. While they tried to come up with an intervention that would not require funding, they still struggled to get resources for simple things like meeting refreshments and stationery. The other challenge concerned gender considerations across many of the MSI activities. The MSI toolkit considered gender issues in the problem analysis, the workplan development, and the observation / monitoring; the scale-up toolkit considered gender in the composition of the NSSG and RT. Much as the toolkit explained the need to consider gender, the DHMTs, RT and NSSG in Malawi did not consciously consider it, and instead focus was on the 'office' the individuals occupied, eg the office of the Director of Health and Social Services, regardless of the gender of the occupant of that office. For example, in one of the interviews during process evaluation one RT member said:

> *"So, there are women like the QMD officer in the central east where we are implementing the first phase of the programme, is a lady. The deputy director of HR is a lady, but I have to be honest that it was not deliberate. It is because of the offices. So, the ladies are occupying these offices. They are involved in the programme." (*RT Member, Male)

Additionally, while there were challenges and little evidence of how gender considerations shaped the implementation of the MSI, there was one positive example: in one district, during MSI cycle 1, DHMT members decided that female supervisors should not go to areas that were further away for supervision, as they would return late in the evening and that might pose challenges because of their roles in the home.

Another challenge relates to the 8-month period for an MSI cycle, which was prescribed by this project. This led to confusion because DHMTs also had to adhere to their 12-month government cycle.

On the research side, one limitation has been the lack of measurable outcomes with which to convince other stakeholders of a need for scale-up. The successes that the districts reported were mostly anecdotal. This stemmed from the inability to come up with measurable indicators for most of the problems the districts worked on. Additionally, given the absence of a meaningful control, we were unable to attribute the MSI to improved health workforce performance and improved service delivery.

One of the greatest limitations is that the process and outcome evaluations did not fully contain findings that lead to a clear understanding why the NSSG model did not work in Malawi. The political economy analysis unearthed some long-standing tensions around power dynamics within the MoH. Even with such interesting findings, it is hard to get the data that helps make sense of why things happened the way they did within the NSSG.

Conclusion

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.

In Malawi it has become clear that the political and economic context in which the MSI and its scale-up was happening has had a remarkable influence on its implementation and scale-up. For example, it has been highlighted how the evolving decentralisation process in Malawi provided both challenges and advantages for the MSI and its scale-up. While the districts have acquired full authority with which to propel the horizontal scale-up, vertical scale-up has had challenges because of power plays between and among government departments at the central level. Also, without a proper funding roadmap, as well as the overdependence on donor money in the health sector, scale-up of the MSI will prove a challenge.

The working relationship between the NSSG and the RTs has had a major impact on the implementation of the MSI and the scale-up.

There were factors that facilitated and hindered the MSI. For example, there was evidence of a political will to improve leadership and management in the districts and therefore the MSI was seen to support this drive. It is because of that political will that some champions for the MSI emerged and these champions are likely to continue to push for the MSI. The RT was well coordinated and worked well in partnership with the CRT in facilitating the MSI. These were enablers of the MSI. On the other hand, the non-optimal performance of the NSSG and the lack of clarity around roles emanating from the unclear decentralisation process worked to the disadvantage of the MSI and its scale-up. Attrition of leaders, both at district and central levels, also affected the MSI and the scale-up as continuity was disrupted. The other challenge was the limited funding available in the districts, which made implementation of the MSI work plans difficult at times.

Although there were these challenges, there are interesting effects that emerged from the MSI. In general, the MSI has improved teamwork and consultation among DHMTs. Most DHMTs indicated that they now work as teams. Also, work planning and then following the work plans through monitoring and supervision has also been enhanced. There is, however, no tangible evidence to indicate that these have translated into improved service delivery. The time frame for the cycles and the project were not adequate to capture this. Also, the disruption caused by the COVID-19 pandemic, which has diverted resources and staff and prevented meetings taking place, has almost certainly had a sizeable impact on workplan delivery.

The costs of the MSI and its scale-up appear to be reasonable. However, it has to be mentioned that in the Malawian context it remains to be seen if the scale-up activities can be funded given the tight budgets that the districts receive. The dependency on partner funding makes it even difficult as those partners usually have their own interests to fund.

The PERFORM2Scale project has laid down a foundation for the MSI and its scale-up. Continued scale-up depends very much on the continued vigilance of the champions and the RTs, and the availability of funding for the MSI and the scale-up. Efforts have been made to mitigate the funding gap by using existing structures within the MoH and QMD to absorb some of the MSI activities that require funding. However, even the future of those structures is not guaranteed, and this casts doubt on the sustainability of the MSI and the scale-up in Malawi.

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