PERFORM 2SCALE
IMPROVING HEALTH WORKFORCE PERFORMANCE

D9.1 Synthesis report

Authors: Joanna Raven, Moses Aikins, Hastings Banda, Susan Bulthuis, Kingsley Chikaphupha, Marjolein Dieleman, Stephanie Huff, Maryse Kok, Wesam Mansour, Thomasena O'Byrne, Olivier Onvlee, Freddie Ssengooba, Kaspar Wyss, Tim Martineau

Improving health workforce performance

Table of Contents

Tables and figures

List of abbreviations

ANC	Antenatal Care
AR	Action research
CAO	Chief Administrative Officer
CHAG	Christian Health Association of Ghana
CRT	Country Research Team
CW	Consortium workshop
DC	District Council
DG	District Group
DHMT	District Health Management Team
DHO	District Health Officer
DDHS	District Director of Health Services
EC	European Commission
GHS	Ghana Health Service
HRH	Human resources for health
HRM	Human resource management
LSTM	Liverpool School of Tropical Medicine
MoLG	Ministry of Local Government
MoLoGRD	Ministry of Local Government and Rural Development
MoPS	Ministry of Public Service
MOH	Ministry of Health
MSI	Management Strengthening Intervention
NGO	Non-governmental organisation
NSSG	National Scale-up Steering Group
OPD	Outpatient Department
P2S	PERFORM2Scale
PI	Principal investigator
PP	Paired partner
PY	Project year
QI	Quality improvement
QA&I	Quality Assurance and Inspection
QMD	Quality Management Directorate
RT	Resource Team
TWG	Technical Working Group
TB	Tuberculosis
ToC	Theory of Change
TORs	Terms of References
WHO	World Health Organization
UHC	Universal Health Coverage
UNICEF	United Nations International Children's Emergency Fund
USAID	United States Agency for International Development

Executive summary

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 (Ghana, Tanzania and Uganda) 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 was scaled-up in the PERFORM2Scale project in Ghana, Malawi and Uganda.

The overall aim of the project was to develop and evaluate a sustainable approach to scaling-up a district-level management strengthening intervention (MSI) in different and changing contexts.

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

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

We adapted a systematic approach for scale-up that has been developed by ExpandNet and WHO and tested in many contexts. This uses both a a horizontal scale-up approach (ie, "expansion and/or replication of the intervention across the country") and a vertical scale-up approach (ie, "institutionalization through policy, political, legal, budgetary or other health systems changes in particular to support the horizontal scale-up") to support an overall sustainable scale-up process. Countries started the scale-up of the MSI in early 2018, following a one-year inception phase, and continued until mid-March 2022. At the same time, the project conducted both process and outcome evaluation activities to identify lessons about implementing and scaling-up the MSI in line with the Theory of Change and its underlying assumptions. We used a range of quantitative and qualitative methods to answer the research questions and developed country reports.

The objectives of this report are:

- To bring together the country findings under the common framework of the PERFORM2Scale Theory of Change
- To consolidate knowledge about action research-based management strengthening
- To strengthen and deepen knowledge on scaling-up a complex intervention

Methods

We developed an extraction tool in Microsoft Excel which was based on the PERFORM2Scale Theory of Change. We read the country reports, which included the implementation and scale-up of the MSI and process and outcome evaluation, and extracted data into the Excel sheet. Where there were data gaps, we went to other reports, such as the country case studies, process and outcome evaluation reports and the annual case study reports. We then synthesised the data from across the countries and developed bullet points of narratives. We discussed these in a consortium workshop in

February 2022 and then developed these narratives. These were then reviewed by the whole consortium for accuracy and coherence and refined.

Key findings

Key lessons of the Management Strengthening Intervention

- The MSI is an effective intervention for management strengthening and can contribute to improved service delivery.
- Deepening of DHMT learning occurs through multiple cycles.
- It was confirmed that the intervention works despite – or even can benefit from – the absence of extra implementation funds, with DHMTs strengthening their management competencies to become more resourceful and responsive to local needs.
- The MSI provides opportunities for district managers to come together to share experiences, learn from each other and overcome challenges.
- It was possible to adapt the intervention to better fit with local needs and budget cycles and expand participation, such as the involvement of a wider group of district stakeholders in the MSI.
- The flexibility given to districts leads to different solutions and approaches. This in turn results in diverse patterns and situations making outcome monitoring challenging (eg in terms of service or health systems improvement).

Key lessons of scale-up

- It is possible to effect considerable scale-up of a complex intervention if the intervention is valued and funds are available for scale-up.
- However, scale-up is not a linear process. It is a bumpy road with advances and set-backs along the way, with a range of factors interacting to influence scale-up.
- Critical to successful vertical scale-up is having a clear, shared vision among the different stakeholders involved about how to institutionalise (components of) the intervention into existing systems. It takes times to develop this shared vision. Then this vision needs to be translated into a strategic plan for scale-up.
- Without vertical scale-up, horizontal scale-up will stagnate and vice versa.
- The ExpandNet approach, adapted for PERFORM2Scale, provides a good guide for scale-up, which needs to be flexible to the context and should be adapted as you go on the scale-up journey. Spending time to identify appropriate existing structures to carry out the role of adopting and implementing the intervention at a larger scale and avoid creating parallel structures is critical.
- Reappraisal of the need and demand for the intervention at an early stage, including a review of programmes with perceived similarities, should be included in the scale-up journey.
- Alignment of the intervention to existing policies and interests needs to be considered at the outset. This requires not only in-depth knowledge of the policy environment and relationships with key decision-makers, but also continuous or frequent observation and scanning of the horizon for windows of opportunity and new and important stakeholders.

Cont.

Key lessons of scale-up cont.

- Evidence is needed to convince stakeholders about scale-up. Major efforts are needed to generate and disseminate convincing evidence. However, it is not only evidence that plays a role in convincing stakeholders of the value of the MSI scale-up. It also depends on the mandate and position of the stakeholders and how they are viewed by others.
- Critical to this is the identification of champions and supportive stakeholders to advocate for further funded scale-up to ensure maximum impact and sustainability of the intervention.
- Thinking and working politically is essential to identify and anticipate changes in power relationships between key stakeholders and decision-makers that would support or hinder scale-up.

Conclusion

Using the structure of the Theory of Change has helped bring together multiple strands of the project, including the implementation and evaluation of the MSI and scale-up. The study confirms that the MSI is effective for developing management competencies and can lead to some improvements in workforce performance and service delivery, but we have learnt more about the MSI, and in particular the effect of multiple cycles. To have a bigger impact, the MSI needs to be implemented much more widely within the health system. While it was possible to achieve horizontal scale-up of the MSI with funded support through the PERFORM2Scale project, we learned the lessons that the journey to achieving longer-term sustainability is unpredictable and may result in substantially modified, but nonetheless contextually appropriate, interventions. The study findings underlined the importance of securing funding sources for whatever form the intervention takes, to ensure longer-term sustainability.

Further information

There is more on PERFORM2Scale and its findings, including the outputs generated by the programme (academic papers, briefs, presentations, blog posts etc), on the consortium website - https://www.perform2scale.org/

Introduction

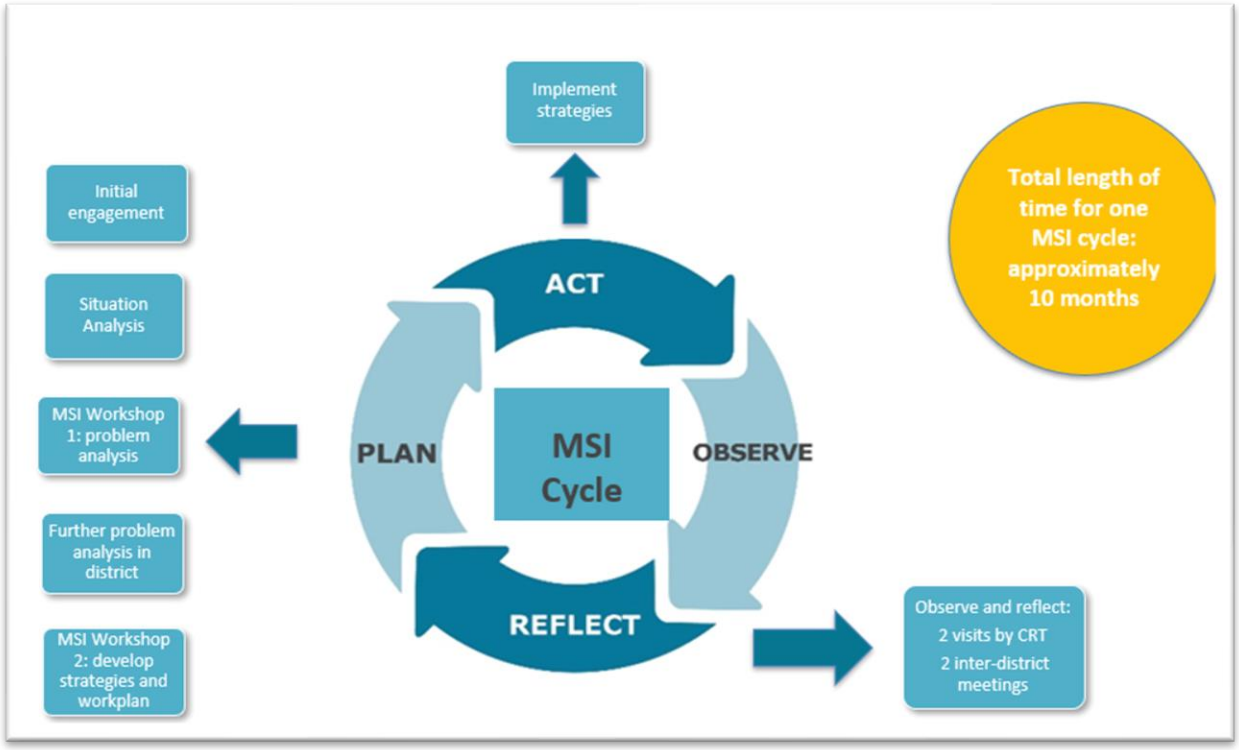
Improving health workforce performance is critical to achieving Universal Health Coverage (UHC). A management strengthening intervention (MSI) for district health managers to improve health workforce performance was tested in three African countries (Ghana, Tanzania and Uganda) during the PERFORM project 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. Based on the PERFORM project findings, the MSI met the CORRECT criteria (credibility, observability, relevance, relative advantage, simple to install, compatibility and testability) (Glaser et al, 1983) for determining whether an intervention is scalable or not (PERFORM2Scale Description of Activity 2016 p10-11; Martineau et al. 2018).

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

This MSI is a complex intervention that uses an action research (AR) approach (Figure 1) to enable the district health management teams (DHMTs) to:

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

Figure 1. PERFORM2Scale Management Strengthening Intervention cycle

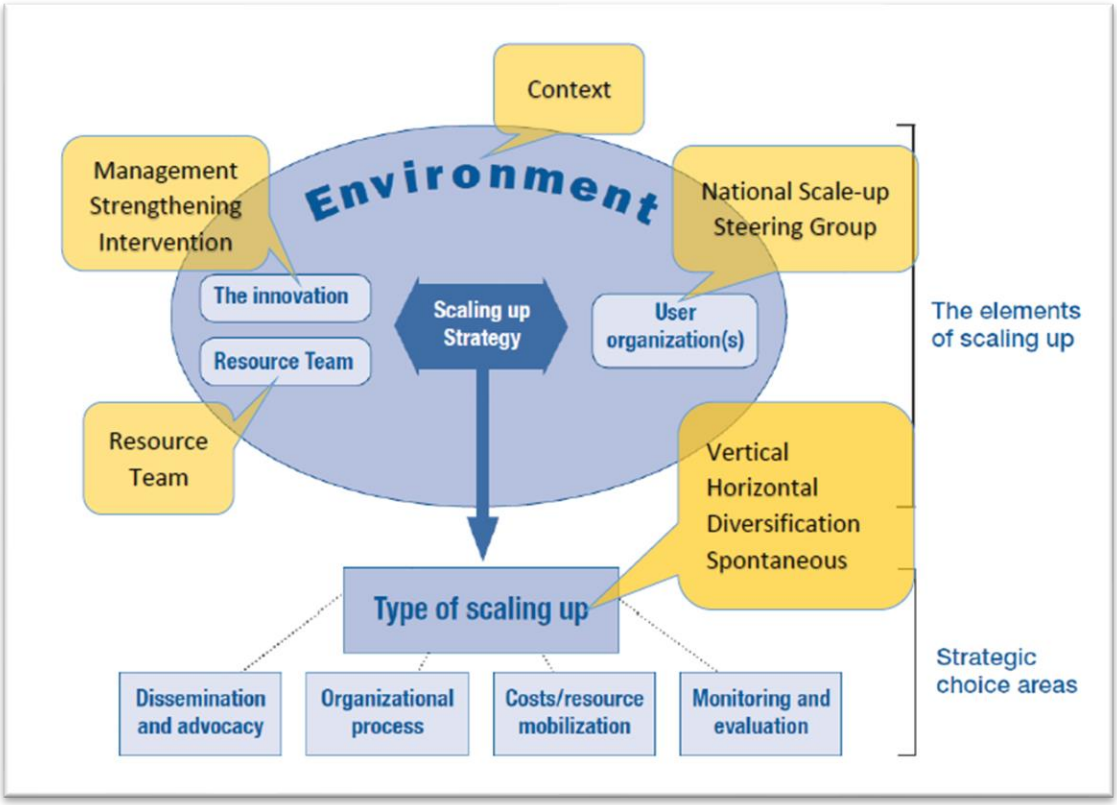


PERFORM2Scale has adapted a systematic approach for scale-up that has been developed by ExpandNet and WHO and tested in many contexts (WHO/ExpandNet 2010). This is described in Deliverable 1.1: Framework and Strategy for Scale-up and is illustrated in Figure 2. This uses both a 'vertical' scale-up approach (ie, "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 (ie, "expansion and/or replication of the intervention across the country") to support an overall sustainable scale-up process. In each country, we identified user organisations that will adopt and widen the scale-up process after the end of the project. These were Ministries of Health in all countries, as well as the Ministry of Local Government and Rural Development in Malawi and the Ghana Health Service in Ghana. All Ministries of Health provided letters of support for the project. From these user organisations, a structure - generically referred to as the National Scale-up Steering Group (NSSG) - was planned in collaboration between PERFORM2Scale's Country Research Teams (CRT) in Ghana, Malawi and Uganda to support and eventually lead on the scale-up process. The plan was also for the CRT to work with the NSSG to identify Resource Team (RT) members to assist with the implementation for the MSI cycles' subsequent expansion as part of the scale-up. The scale-up process was designed to start with one group of three neighbouring districts 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, so achieving horizontal scale-up. The plan was for the project to support the start-up and implementation of the MSI for three district groups to the end of project year 4. The project would assist with planning of the MSIs for a fourth district group, but hand over support to the NSSG and RT – including acquisition of funding - for the implementation (DOA, pp19-20). The main elements of the PERFORM2Scale scale-up framework were translated into the project's Theory of Change (Figure 2) to monitor and evaluate the MSI implementation and scale-up. This Theory of Change was regularly reviewed and updated overtime and is an iterative process of learning and reflection on scaling-up MSI.

Therefore, there are two components of the scale-up strategy:

- First, **the expansion of the MSI across districts** as per the horizontal scale-up plan developed at the start of the project with the NSSG and RT, which is funded by the PERFORM2Scale project.
- Second, **the scale-up strategy**, which was worked on throughout the project, would include what happens beyond the initial horizontal scale-up and after the end of the project, and incorporates the concepts of handover and funded absorption of the MSI into structures and policies (vertical scale-up).

Figure 2. The PERFORM2Scale framework for scaling-up (adapted from ExpandNet/WHO)



At the same time, the project planned both process and outcome evaluation activities to identify lessons about implementing and scaling-up the MSI in line with the Theory of Change and its underlying assumptions. We used a range of quantitative and qualitative methods to answer the research questions as outlined in Table 1.

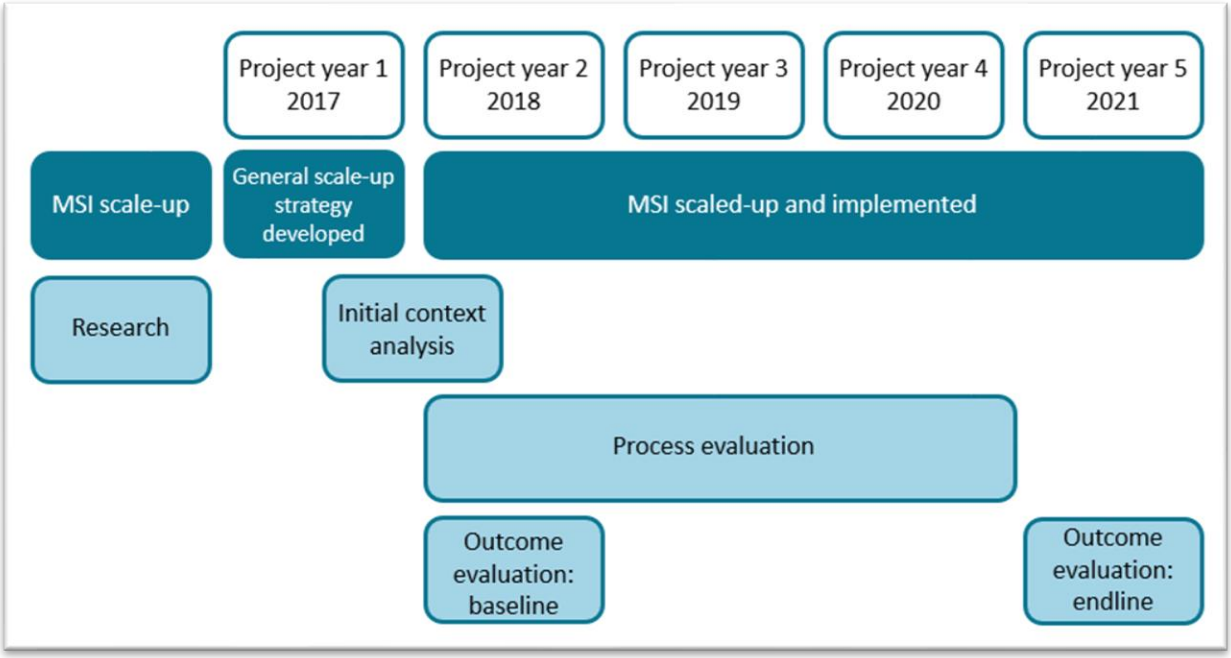
Table 1. PERFORM2Scale research questions and methods

Research questions	Methods
Initial context analysis	
1. How could 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?	• Document review • Reflection with Country Research Team • Interviews with stakeholders, eg MoH, DHMTs, local government
Process evaluation	
3. How is the MSI implemented? 4. How is the MSI scale-up strategy implemented? 5. How do factors, processes and initiatives facilitate or hinder implementation of the MSI? 6. How do factors, processes and initiatives facilitate or hinder implementation of the scale-up of the MSI?	• Tracking MSI and scale-up implementation • Scale-up assessment with Resource Team, National Scale-up Steering Group • Interviews with DHMTs • Reflection with Country Research Team

Outcome evaluation	
7. What are the effects of MSI on management strengthening, workforce performance and service delivery? 8. What are the outcomes/effects of scaling-up the MSI? 9. What are the costs of the MSI? 10. What are the costs of scaling-up the MSI?	• Tracking and costing of MSI and scale-up implementation • District situation analysis and HMIS synthesis • Management competency survey with DHMTs • Decision space assessment with DHMTs • HR strategies survey with health workers

We developed a general/non-country specific scale-up strategy and conducted the initial context analyses in each country in 2017. From 2018 to 2021 we implemented the MSI, expanding it across geographical areas in each country. At the same time, we worked to operationalise the scale-up framework in each country and, together with the user organisations, we developed country-specific scale-up strategies to institutionalise the MSI in national policy, plans, guidelines or curricula. Research activities, including process and outcome evaluation, ran throughout this period. Figure 3 shows the timeline of activities.

Figure 3. PERFORM2Scale timeline of activities



Objectives of this report

- To bring together the country findings under the common framework of the PERFORM2Scale Theory of Change
- To consolidate knowledge about action research-based management strengthening
- To strengthen and deepen knowledge on scaling-up a complex intervention

PERFORM2Scale's Theory of Change

The Theory of Change consists of two pathways: Pathway 1 on the scale-up process and Pathway 2 on the management strengthening process as shown in Figure 4 (Source: Theory of Change for scaling up management strengthening at district level to support the achievement of UHC.[1]). The purpose of this Theory of Change is to clarify the main outcomes and the necessary processes and associated assumptions to achieve these outcomes over the whole project period.

Pathway 1 (Scale-up) starts with the outcome that the user organisations are convinced of the value of the MSI and that it is both scalable and can be adapted as needed. This is essential for the project to be able to start. Activities that are needed to reach this outcome include stakeholder engagement based on the evidence from the PERFORM 'pilot' and other examples of similar interventions. Initial support in establishing the scale-up infrastructure (mainly the NSSG and the RT) is directed by the project through the CRT and paired partner (PP)[2]. The infrastructure established enables a scale-up strategy to be developed. Assuming the experiences from the first MSI cycles are positive and are sufficiently well disseminated, champions for scale-up who emerge from within or around the NSSG and RT activate a wider group of stakeholders who are convinced about the value of the MSI scale-up. This stakeholder support is essential for the NSSG and RT to plan for the second and third District Groups and to gradually ensure that health policies, plans and resource allocation at national and regional levels support the ongoing scale-up of the MSI. The knowledge gained from the scale-up of the MSI supports the effective scale-up of other health systems/service delivery areas, resulting in improved service delivery and contribution to UHC.

Pathway 2 (Management strengthening) commences with the plans for implementing scale-up of the MSI with District Group 1, but the pathway also applies to District Groups 2 and 3. For all districts, the pathway starts with the outcome that DHMTs are capacitated in the MSI/action research approach. The process of going through the action research cycle (as described above) leads to strengthened management skills and teamwork, and increased confidence and independence of DHMTs. Addressing workforce and/or service delivery problems contributes directly to improved service delivery. If the NSSG, RT, DHMTs and other stakeholders see the value in the MSI for improving workforce performance and management strengthening at district level, they will continue with horizontal scale-up to include more district groups. If DHMTs are convinced of the value of the MSI they will continue using it and, with experience gained from some of the DHMT members and the RT acting as facilitators for MSIs in other district groups, will wish to have the skills to use the MSI independently, thus embedding the MSI in the DHMT way of working. The collective ongoing use of the MSI across an expanding number of district groups will contribute to improved general management, leading to improved service delivery. It will also contribute to improved workforce performance management, and therefore improved workforce performance, also leading

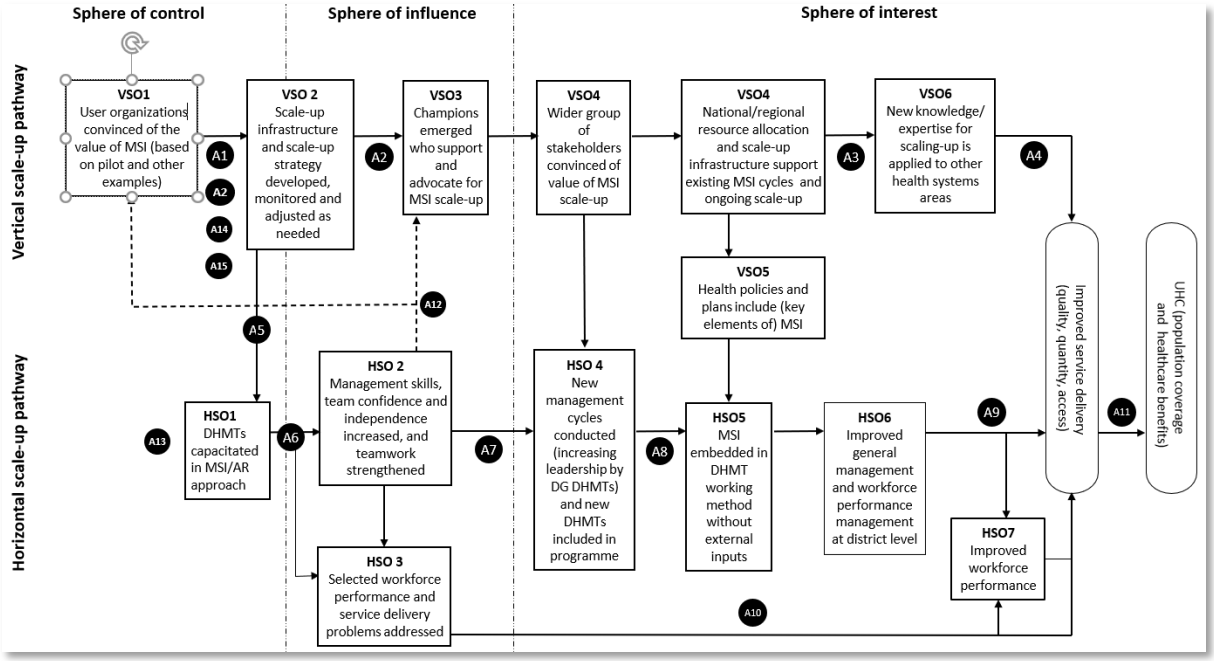
[1] The assumptions are given in the full document available at: https://www.perform2scale.org/theory-of-change-for-scaling-up-management-strengthening-at-district-level-to-support-the

[2] A European partner working with each CRT

to improved service delivery. Improved service delivery contributes to the achievement of UHC. If the MSI is not continued in its current form, windows of opportunity to integrate (parts of) the MSI in existing structures and strategies need to be identified and used in order to contribute to improved service delivery.

The Theory of Change, and the assumptions between its outcomes (see Table 2), provide an appropriate analytical structure to review the different characteristics of the scale-up process in each country since its two pathways focus on scaling-up the intervention, how it starts and how it is implemented.

Figure 4. PERFORM2Scale Theory of Change



Key: A1 = Assumption; VSO1 = Vertical Scale-up Outcome 1; HSO1 = Horizontal Scale-up Outcome 1.

Table 2. Assumptions underlying the Theory of Change

Assumptions
1. Key stakeholders are convinced by the available evidence about the MSI and are *initially* (assumption 1a) and *remain* (assumption 1b) willing to collaborate with the scale-up process
2. Attention of National Scale-up Steering Group members (assumption 2a) and Resource Team members (assumption 2b, added in 2018) not diverted by other priorities; low staff turnover of National Scale-up Steering Group members (assumption 2c, added in 2020)
3. New knowledge on scale-up lessons is sufficiently well *documented* (assumption 3a) and *disseminated* (assumption 3b)
4. Sufficient opportunities to apply scale-up knowledge available
5. DHMTs willing to participate in the intervention even though no implementation funds are provided
6. Effective facilitation skills of Country Research Team (assumption 6a) and Resource Team (assumption 6b) during action research cycles; work plan developed by DHMTs are feasible (time-frame, decision-authority, resources) (assumption 6c) and address real problems (assumption 6d)
7. DHMTs remain convinced of the value of the MSI (assumption 7a); and sufficient support available from Resource Team to support expansion of district groups (assumption 7b)

8.	Resource Team members develop sufficient facilitation skills from working with new district groups (assumption 8a); low turnover of Resource Team members (assumption 8b)
9.	DHMT remains key organisational structure at sub-national level (assumption 9a); DHMT works as a team (assumption 9b); low turnover of DHMT members (assumption 9c); decision-space does not decrease (assumption 9d)
10.	DHMT's involvement in this project, with the consequent opportunity costs, does not undermine (through possible diversion in project activities) health service delivery
11.	Service delivery plans remain in line with health care needs
12.	New knowledge on MSI lessons is sufficiently well documented (assumption 12a, added in 2019) and disseminated to relevant stakeholders (assumption 12b, added in 2019)
13.	The MSI is a scalable intervention, and if needed further adapted to the context in which it is implemented (added in 2021)
14.	There is an understanding of power relationships between key stakeholders, which could potentially hinder or facilitate scale-up
15.	Windows of opportunity to integrate (parts of) the MSI in existing structures and strategies are identified and used (added in 2021)

Methods

We developed country reports from the data shown in Table 1. For this synthesis report we developed an extraction tool in Microsoft Excel which was based on the PERFORM2Scale Theory of Change. We read the country reports, which included the implementation and scale-up of the MSI and process and outcome evaluation, and extracted data into the Excel sheet. Where there were gaps, we went to other reports, such as the country case studies, process and outcome evaluation reports and the annual case study reports. We then synthesised the data from across the countries and developed bullet points of narratives. We discussed these in a consortium workshop in February 2022 and then developed these narratives. These were then reviewed by the whole consortium for accuracy and coherence and refined. As the scale-up process is ongoing, some information from reports up to mid-March 2022 has been included.

Findings

This section is structured by the Theory of Change and is divided into the horizontal and vertical scale-up pathways. We have also included data on the assumptions where relevant.

Horizontal pathway

1. Adaptations of the MSI

The management strengthening intervention – known as the 'MSI' – evolved during the PERFORM project and was used in a similar way across the three countries for one 'cycle'. The MSI process was captured in a toolkit comprising general guidelines for each of the stages of the action research cycle and detailed tools such as workshop programmes, observation checklists, PowerPoint presentations and reporting formats [PERFORM 2019]. The toolkit was slightly revised for PERFORM2Scale [PERFORM2Scale, 2018] to improve clarity and ensure that gender was considered at many points in the cycle, but in particular during problem analysis and strategy development stages [PR1 p11]. It was agreed amongst consortium partners that for the first cycle in each country, the MSI would follow the guidelines in the toolkit. Due to staff changes for many of the CRT members – and all in the case of the Malawi CRT – this was their first experience of conducting the MSI. However, as the CRTs and RT became confident with running the MSI, all three CRTs began to

introduce locally-appropriate improvements in the second cycle or with new district groups. The changes were based on their experiences which increased with multiple groups and multiple cycles.

CRTs found that more time for relationship building with the DHMTs was needed (Uganda CRT added a pre-visit before the formal orientation) and more ongoing support was provided through additional visits to the districts (especially during the problem analysis and strategy development phase) or the length of the workshops was extended (for example, the Malawi CRT extended the second workshop from 2.5 to 3.5 days[3]). In Uganda, as all participating DHMTs in one group decided to continue working on their chosen problem in the second cycle, a hybrid workshop was used combining the two workshops as the break in between was not needed to identify and analyse new problems.

As the CRTs gained a better understanding of how health service decisions were made at district level, other actors from the local government in Malawi and Uganda were involved in the MSI in addition to the DHMT. In the evolving decentralisation in Malawi, it became clear that the district council needed to be involved to support the implementation of the DHMTs' workplans. In Uganda, this included the district council's human resource and planning officers as well as the chief administrator of the district. In Uganda, an additional step to increase 'buy-in' was used for disseminating the workplan to a broader group of stakeholders.

> *"So, when we come with the project plan, the first activity we do is disseminate that project plan and we call all the in-charges, the CAO, the politicians, and we inform them about the plan and what we intend to do. So, from the beginning, all the key district stakeholders are brought on board."*
> (DHMT member, Uganda) [ONUG p 2]

The original plan was to have an eight-month period for implementing the workplan, partly so that three complete cycles could be conducted during the period of the project[4]. However, in Malawi and Uganda the implementation period was extended to fit with the districts' annual planning cycles and in some districts in Ghana the DHMTs extended the implementation period for their workplans [GCR p29].

2. DHMTs capacitated in MSI/AR approach

The MSI eventually reached 27 DHMTs[5] across the three countries and most of them demonstrated through the problem analysis and workplan development that they are capable, with some assistance from the CRTs and RTs, of using the action research approach of the MSI. An important feature of the MSI process that was mostly evident was how strategies within the workplans were clearly informed by the problem analysis, thus improving the viability of the workplan to address the root causes of the problems.

> *"So, I have seen myself and my facility probably the health sub-district improving in the way we manage problems because many times people want to jump on to problem without going into the root cause of it. So, when I try to help my colleagues, in meetings with my colleagues*

[3] One of the original planning principles was to limit the amount of time the DHMTs were away from their workplace.
[4] Of the five years, Year 1 was to be dedicated to conducting an initial context analysis study and Year 5 was for the evaluation
[5] Though in District Group 3 in Ghana Atiwa East and West – both part of Atiwa District - worked on different problems.

we go through different root causes"
(DHMT member, Uganda) [ONUG p1]

In Uganda, three districts continued with cycle 1 problem in cycle 2. For one district, they had started to see increases in the tuberculosis cure rate and wanted to continue with improvements. The other two districts were addressing absenteeism, a complex problem, which they had only just started to deal with [UASUP3]. The connection to the problem analysis was not always clear and in one district in Malawi the link between a strategy to "introduce a private section in the hospital to generate finances" and the problem of "lack of staff induction" was unclear.

Some of the workplans developed were quite sophisticated in their use of a coherent mix of strategies, both related to workforce performance and service delivery, to address a particular problem (see Box 1).

Box 1: Example of workplan integrating human resources and broader health systems strategies in Ghana to address low NTDs case detection (Buruli ulcer and leprosy).

The following six human resource/service delivery-focused strategies were developed to address the selected problem: (1) In-service training; (2) Community engagements; (3) Build capacity of volunteers; (4) Conduct active case search on Buruli ulcer and leprosy and submit reports monthly by trained volunteers; (5) Use of health workers (active and passive case search); (6) Strengthen integrated monitoring and supportive supervision. [GCR p25]

The 'reflection' stage of the action research cycle is a critical aspect of learning. Originally, the plan was that reflection would be stimulated through the use of a diary managed by the DHMT. In some cases this worked initially, but the logistics of maintaining a diary between team members stationed in different locations was challenging. WhatsApp groups were established in Uganda and the Ghanaian CRT set up an E-diary, but there was no evidence that these were sustained. Some DHMTs did continue with the diary despite challenges encountered, noting the benefits of written reflection to monitor progress, document details to later trigger memory, and catalyse collective dialogue. It was also clear – even though they might not have recognised it at first - that the DHMTs were reflecting on the MSIs during support meetings with the CRTs, the inter-district meetings and the DHMTs' existing routine work meetings.

"*At the end of every quarter, we have a meeting and review our reports and compare the results with the previous years. That is usually the reflection that we do as part of the MSI. Previously it was not something that we were doing but the MSI has opened our eyes and minds with regards to problem identification and problem-solving*."
(DHMT member, Ghana) [GCR p43]

Staff turnover amongst the DHMT was reported by some informants, but most teams managed to maintain a critical mass during the project and bring new DHMT members up to speed. In Ghana, several initiatives were used to address the impact of turnover of DHMT members including retraining in the MSI approach and including members from the sub-districts and in-charges to support institutional memory and sustainability of the MSI [GCR p28]. They also used some members from the early district groups as RT members in the latter district groups – thus strengthening capacity at district level for running subsequent MSI cycles.

One of the main principles of the management strengthening initiative and its sustainability was that extra resources would not be provided by the project for the implementation of the workplans and therefore that the strategies within the workplan needed to be feasible [DOA p19]. It was

recognised that in the context of development assistance at district level, where projects were expected to come with resources, this principle was seen as a risk to the project. The CRTs needed to repeat the policy of not providing extra resources – sometimes frequently at the beginning of the project. Though not all stakeholders agreed with the policy, some looked at it quite favourably. In some cases, the DHMTs became quite entrepreneurial, as shown in these examples from Uganda and Ghana:

> "*[…] So, if I have an activity with an implementing partner (IP), then you say you have these things that need to be delivered (on MSI work plan) […] so I go with the IP, I do what I am supposed to do but I also find time and also do MSI activities*."
> (DHMT member, Uganda) [UCR p30]

> *"…we ride on the back of other programs to do what we are supposed to do. For instance, when we go to the sub-district to do something on malaria, we chip in aspects of all the things that we do. So, we don't just go out to the facilities and sub-districts for just one activity, we try to do a bit of everything."*
> (DHMT member, Ghana) [ONGH p6]

Some DHMTs reported that they saw the absence of implementation funds as a benefit due to recognition that a lot of money is not always needed to address problems, and that if needed development partners – particularly in Uganda and Malawi – can be lobbied, and funds may also be found within existing budgets or within existing projects.

> *"what we've actually learnt with the help of the PERFORM2Scale is that even the little resources that we have, we should be able to plan, … so that the activities or the objectives that you want to meet can be met without actually saying that 'no, we didn't do this because we didn't have adequate resources.'"*
> (DHMT member, Malawi) [ONMW p4]

3. Management skills, team confidence and independence increased, and teamwork strengthened

To ensure that management skills, team confidence and independence increased, and teamwork was strengthened, it was assumed that the DHMTs would develop workplans that were within the scope of their authority and financial means and based on problems they were concerned about. The previous section demonstrated that DHMTs were able to develop such plans. It was also assumed that effective facilitation would be required during the MSI cycle. Though the quality of facilitation was not specifically monitored, there was no negative feedback in the workshop evaluations about facilitation. Positive examples of facilitation were reported in Uganda with particular reference to specialist skills in human resource management provided:

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

The CRTs also facilitated peer-to-peer learning, such as giving positive criticism when providing feedback to other teams during workshops and inter-district meetings, and this was also appreciated by the participants. This helped them to appreciate each other's efforts and to contribute to the improvement of the outputs of other teams without affecting their confidence [UCR p32].

"*There is peer-to-peer interaction. […] when I sit here, there is a DHO of DHMT_3 and DHO of DHMT _1, there are doctors from DHMT _1, we learn from each other because this one tells you how they do things and how it had worked. […] In one of the meetings I shared with them how we use number of days worked to calculate salary paid*."
(DHMT member, Uganda)

The development of management skills related to generic problem solving and strategy development has been described in Section 2. Specific knowledge related to the management of human resources has been developed through addressing related problems in Uganda (such as absenteeism) and Malawi (such as lack of supervision and induction). Changes occurred in the way in which the DHMTs mostly began to work more effectively as teams. As a result of the structure of the MSI cycle, DHMT members met more frequently, with an overall reported increase in the regularity of meetings to a moderate and large extent across the three countries. Ghana reported the highest rates, despite the slight decrease in 2021 from baseline in 2018 (98% versus 100%), followed by Uganda (66% versus 88%) which also has the greatest increase and Malawi (78% versus 88%) [Tool 12, cross country report].

"*… in the beginning we did not have meetings …… But with* [PERFORM2Scale]*, the number of meetings have increased where, its where we try to solve most of the problems as a team*"
(DHMT member, Malawi)

Two examples from Ghana show that addressing problems together – whereas previously this would have been done by individuals or units - strengthened teamwork:

"*Yes, at first we used to work as units. I am the Public Health Nurse and I work in the Public Health Unit. The Disease Control Unit also works differently from us because they are at the disease control unit, hence they identify and solve their own problems as a unit. The same was with nutrition and other units but now because of the MSI we can identify problems from other units and solve them together as a team. At first, a Buruli ulcer issue would have been seen as a disease control unit problem, so myself as the Public Health Nurse would not have bothered with it, but now due to the MSI I see it as a district problem and I play a very good role, better than before.*"
(DHMT member, Ghana) [GCR p33]

"*Since the introduction of the MSI management tool, I have now come to realise that you can't do it alone, you need the collaborative efforts of your colleagues. You need their ideas, their suggestions then together we move forward. You can't do it alone*."
(DHMT member, Ghana) [GCR p43]

However, some DHMTs in Uganda noted that the process of problem identification and analysis was quite challenging and reaching a consensus was sometimes difficult, mainly due to differences in academic backgrounds and specialities amongst the core DHMT members [UCR p33]. DHMTs in Uganda and Ghana reported a slight increase in their scoring of problem analysis skills after the implementation of the MSI (0.1 and 0.2, respectively), whereas DHMTs from Malawi reported an increase of 1.2 (2.1/5 in baseline versus 3.3/5 in endline) [Tool 12 cross country report].

The need to broaden the team to incorporate specific skills sets and include wider decision-makers was realised:

"*Yeah, to me I feel like there's a change because I've been involved in so many activities concerning our problem that we identified here at XXX because at the beginning I was just concentrating on my section, on human resource, the discipline things, but when*

PERFORM2Scale came and we identified our problem, I've seen that I have been involved much like in assisting to overcome our problem which we have like looking at the staffing gaps, yeah; and maybe in the past I could not follow what really goes on at the hospital in terms of data, I was not all that familiar but at least this time I am able to follow if there's any problem and I can even assist."
(DHMT member, Malawi) [ONMW p1]

"We had to look beyond our DHT and actually go on to involve other stakeholders like the HR and the district leaders. […] As DHT we realised that service delivery requires other people outside the health sector. […] you would realise that there is someone more technical about health workforce performance and that is the HR team, and the HR team is mainly administrative and do not want to be involved in health service delivery. But with the MSI we had to work very hard to bring them on board."
(DHMT member, Uganda) [ONUG p2]

As mentioned in Section 1, the toolkit included questions and prompts on gender. Consequently, gender was considered throughout the MSI process of problem analysis and strategy developments. Examples include one DHMT in Malawi not sending female supervisors to remote locations because they would return late in the evening, and one consideration in Ghana related to improving access to service delivery:

"*We did consider gender in the MSI. We have, for instance, situations where the women want to come to the antenatal care but the men will say 'I will not give you transportation fare'. So, for every plan we do we make sure that we have the male involvement*."
(DHMT member, Ghana) GCR p48

Although the process of problem-solving was not completely new to most DHMT members, taking responsibility for problem selection, strategy design and the implementation was somewhat new. In Uganda, the CRT introduced a DHMT self-assessment and confidence discussion into workshops [UCR p45]. In their self-assessment, Ugandan DHMTs showed the highest level of confidence in the problem identification and analysis parts of the AR cycle followed by the workplan and strategies development stage, whereas for the implementation stages confidence was lower.

Some DHMTs demonstrated increased independence as a result of the MSI process by addressing problems that otherwise they would have deferred until they received regional or national support.

"I have learned a lot because through the MSI we have been able to handle a lot of our problems at our level. We at the district level have been able to solve some of our issues locally, by not having to wait for the region or national level. Also, we do a lot of things with less money involved. So I think I have learned a lot about doing things with limited finances available."
(DHMT member, Uganda) [ONGH p3]

4. Selected workforce performance and service delivery problems addressed

About half (21/43)[6] of the problems selected by DHMTs over the various MSI cycles have been directly related to service delivery problems (see Annex 1). In Ghana all problems were based on service delivery, in Malawi all problems except one were based on performance management, and in Uganda the majority (11/18) were based on performance management. These included high levels

[6] Some districts repeated the same problem in a subsequent cycle

of malaria positivity or fresh still births, low levels of coverage (eg ANC, Td2+ vaccination, or low case detection rates). In the detailed problem analysis, causes related to both health systems in general (supplies, transport etc) or health workforce performance (staff availability, competencies etc) were identified and then, where feasible within available time and resource constraints, addressed with appropriate strategies in the workplans developed. For example, Ayensuano district in Ghana addressed low ANC coverage in Cycle 1 through a mixture of workforce performance-related strategies (including staff capacity building, supervision and reward) and broader health systems-related strategies such as procurement of basic laboratory equipment and various forms of community engagement [GCS pp 32 & 35).

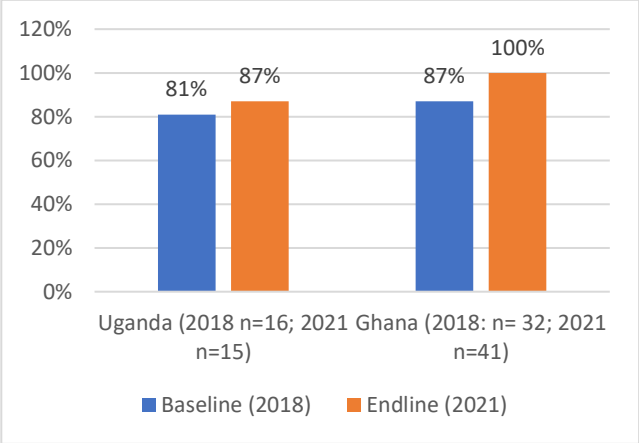
Other problems selected by DHMTs in Malawi and Uganda related to workforce performance, such as absenteeism, lack of or poor management of staff appraisals, and weak supervision systems, all of which are likely to affect the quantity and quality of service delivery. After the implementation of the MSI, Uganda and Malawi reported an increase in the perceived receipt of supportive supervision, feedback and mentoring to a large extent in comparison to baseline (24% baseline versus 44% endline in Uganda and 7% baseline versus 33% endline in Malawi), while Ghana experienced a slight decrease (47% vs 38%) [Tool 12 cross country report]. One problem identified related to the late entry of data into the health information system, which would affect the monitoring of health service delivery. This problem continues to be persistent even after the implementation of the MSI in Uganda (88% baseline versus 67% endline), and despite the reported increase is still a shortcoming in Malawi too (43% in baseline versus 69% endline). In contrast, Ghana does not report having shortcomings with data management (92% in baseline versus 95% in endline) [Tool 12 cross country report].

Other improvements to the workforce performance support system were reported after the implementation of the MSI, especially in Uganda and Malawi: availability of national/regional guidelines (82% vs 88% in Uganda and 93% vs 100% in Malawi), and availability of team meetings minutes (75% vs 88% in Uganda). While Ghana registered slight decreases in the above-mentioned domains, along with Uganda it registered an improvement in accuracy of job descriptions (87% v 100% in Ghana and 81% vs 87% in Uganda) and supportive supervision (85% vs 90% in Ghana and 59% vs 81% in Uganda) (Figures 5 to 7) [Tool 12 cross country report].

The assumption was that the work as part of the MSI would not undermine other work of the DHMT and therefore undermine service delivery. As shown above, the type of problems selected by the DHMTs would only provide added support to service delivery, either by directly solving service delivery problems or by strengthening general management and performance management systems. It was more a case of other priority programmes displacing the workplans developed as part of the MSI. The most significant example of this, which took place in all three countries, was when some workplans from early 2020 were displaced by activities related to COVID-19:

> *"…It [COVID-19] really affected the activities because the workload COVID brought to the health service was massive. All our attention was geared towards COVID and how to fight it. Most of our activities went into the background and were replaced by COVID. For example, when we are always out to take COVID samples and check on COVID patients and all that, it takes away time from the MSI activities ...."*.
> (DHMT member, Ghana) [GCR p37]

Figure 5. Availability of updated job descriptions (left) and access to national and regional guidelines (right) as seen by DHMT members



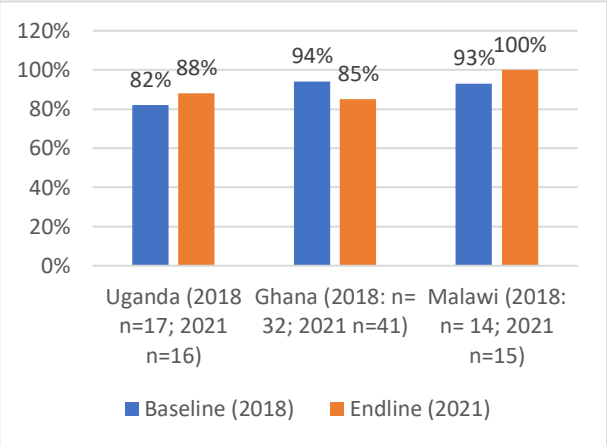
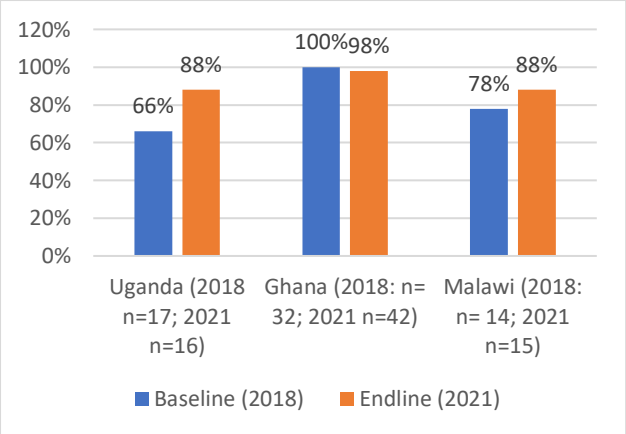


Figure 6. Regularity of team meetings (left) and records of team meetings (right) as seen by DHMT members



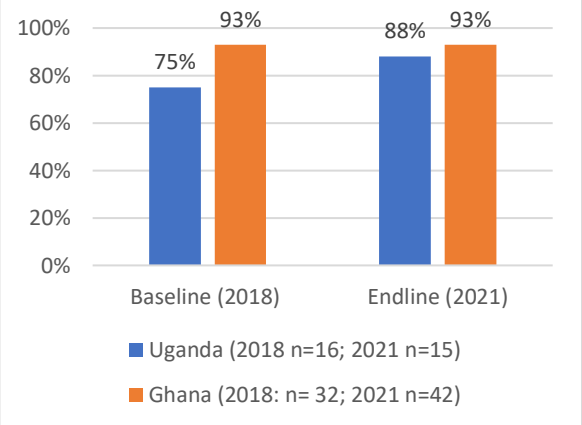
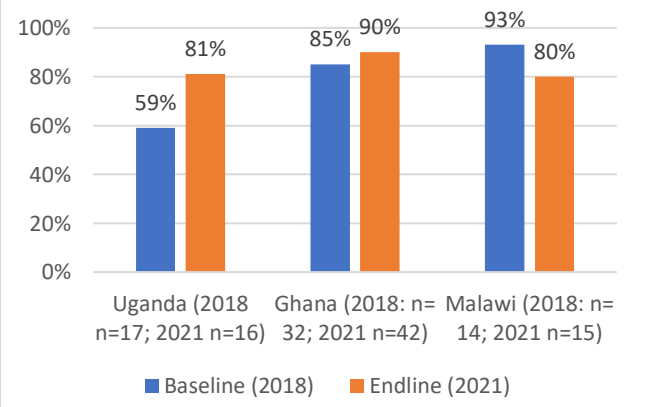
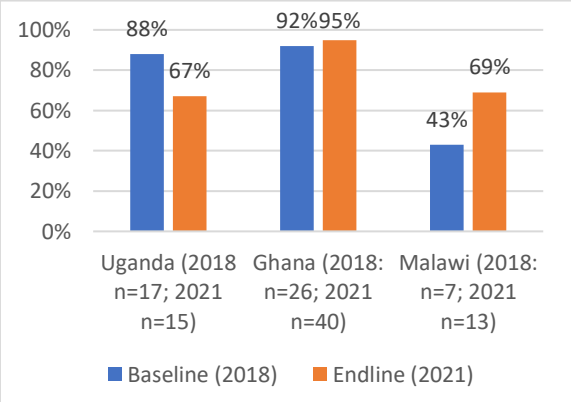


Figure 7. Supportive supervision, feedback & mentoring from supervisor (left) and records of team meetings (right) as seen by DHMT member





5. New management cycles conducted and new DHMTs included in programme

The support from the Ministries of Health in Malawi and Uganda and the Eastern Regional Directorate of Health in Ghana continued during the project period. As a result, the MSI was introduced in two district groups (each comprising three DHMTs) in Ghana and Malawi. A third group in both countries was started. In Uganda, the MSI was conducted fully in three district groups.

As was confirmed by a number of the DHMT members, management strengthening deepened as a result of repeated MSI cycles. In Uganda, they completed three cycles in the first group of districts, whereas Ghana and Malawi completed two. Details and the timing of the MSI cycles are given in Figure 8 below.

Figure 8. Progress in scale-up of the MSI by country, district group and project year (March 2022)

District group/ county	Implementation stage				#Districts	#MSI cycles
Project Year	PY2 - 2018	PY3 - 2019	PY4 -2020	PY5 - 2021		
Ghana						
DG1	MSI1	MSI2	MSI 2 cont'd	MSI 2 cont'd	3	2
DG2		MSI1	MIS1 cont'd	MSI2	3	2
DG3				MSI1	3	1
Uganda						
DG1	MSI1	MSI2	MSI3	MSI3 cont'd	3	3
DG2		MSI1	MSI2	MSI2 cont'd	3	2
DG3			MSI1	MSI1 cont'd	3	1
Malawi						
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
Totals	**3**	**6**	**7**	**9**	**27**	**15**

The experience of PERFORM2Scale has demonstrated that it was possible to manage the horizontal scale-up, both in breadth and depth in the three countries. The process went at different speeds and in all cases it was reported that progress was hampered by the COVID-19 pandemic.

6. MSI embedded in DHMT working method without external inputs

District management teams reported on a number of elements of the MSI that they felt they could use in other areas of work. Generally, the approach to analysing a problem and developing strategies to address it seemed transferable. One DHMT member in Ghana reported on the need to get good data to analyse any problem identified. [GCR p 44].

The longer the exposure to the MSI – ie the more cycles completed – and the more confident the DHMTs became, the more likely it was that the approach became embedded into routine management at district level. The initial group of three districts in Uganda was able to go through three cycles, and this gave them the skills that would enable them to continue the MSI.

> *"There are certain activities that we can surely carry on, for example, given the training the MSI cycles itself has given us, problem identification, prioritisation, these are things that we are going to continue in our system. As managers, we are going to face problems and we need to find strategies. So, the knowledge is going to remain. […] By integration, we can [also] sustain [implementation of] some bits of MSI."*
> (DHMT member, Uganda) [ONUG p9]

The way in which the facilitation support would continue after the project's end was not specified in the initial project plan, though it was assumed that district groups might develop such facilitation skills themselves. In Ghana, with support from the Regional Health Directorate, this facilitator role was taken up during the project period by active DHMT members who had participated in the first MSI cycles in DG1. They joined the RT and were able to share hands-on experience during workshops and meetings [GCR p30]. Such formal engagement in facilitating other districts in Malawi and Uganda was not reported.

The fact that extra implementation costs were not provided helped DHMT members to see the importance of getting activities funded through the annual budget as part of their normal management activities. They also saw the need to lobby development partners or politicians if more funds were needed, as shown in the example from Ghana below.

> *"We consulted our stakeholders because we needed to procure more urine tests for all the facilities, so the Director consulted the identified stakeholders for help, she even consulted the MP [Member of Parliament] for the district, and the MP assisted us so we lobby a lot for logistics for the facilities."*
> (DHMT member, Ghana) [ONGH P5]

Some, though not all, DHMTs were influenced by the focus on gender during the MSI process: *"To a certain extent the MSI helped us to consider gender. We used to not bother to look at gender but now after the MSI workshops, we consider gender while posting new staff."*
(DHMT member, Uganda) [ONUG p 7]

In some cases, the DHMTs had sufficient experience of the MSI approach to apply it when the COVID-19 pandemic started.

> *"I'm able to apply these principles in the day-to-day activities. […] now we are […] grappling with COVID-19, […]no one was prepared, […] we lacked resources to go to the communities and do case tracing and what have you, but we had to use the available resources to respond to the problem […]. And that is basically the principle of MSI which we applied."*
> (DHMT member, Uganda) [ONUG p10]

> "*When pandemic is here as we speak and some of the approach was the same model to ensure that we have brainstorm the challenges. Prioritise, mapping solutions and issues to assign (responsible person) and make work plan and then go and implement them and evaluate."*
> (DHMT member, Malawi) [UOMW p16]

The ability to achieve more with available funds was illustrated by this approach to working in the COVID-19 pandemic:

> "*We did a lot of COVID activities – like sensitisation, safety protocols, nutrition, etc. – with limited funds and it was because of the knowledge we acquired in the MSI, we were able to handle a lot of things without funds. Previously we would have waited, saying that since we do not have funds we cannot carry them out*."
> (DHMT member, Ghana) [GCR p46]

The MSI approach does not become embedded without good leadership at the district level and the creation of a collaborative and supportive environment, and in some cases it was identified that the use of the MSI had lapsed. The supportive approach of the CRTs and RTs was very important for embedding the MSI approach. One respondent in Malawi implied that this support enabled them to continue without further assistance:

> "*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, Malawi) [MCR p33]

7. Improved general management and workforce performance management at district level

Some DHMT members felt that the MSI process contributed to their general planning skills, for example, the development of annual district plans, as mentioned above. The MSI process had helped them think more innovatively and creatively without needing additional resources [UCR p53]. The process has also provided them with the stimulus to deal with longstanding problems that they had been waiting for the MoH to address. An example was given from Malawi of the reopening of an abandoned health centre in Dowa district [IDM Malawi June 19, p5]. The knowledge of stakeholder mapping and engagement improved for one of Ghana's DHMTs (Ayensuano District). This allowed them to successfully lobby stakeholders for critical logistics concerning ANC services to support the implementation of their workplan [GCR p45].

DHMTs reported perceived changes in staff attitudes to work, performance, and service delivery indicators in all districts. For instance, a DHMT in Ghana in DG2 observed that the MSI contributed to improving their performance ranking within the region, with the district being placed in fourth position in 2020 compared to last position in previous years. Health facilities that were unable to provide antenatal care services were now able to do this, by seconding hospital staff for practical hands-on training [GCR p47].

As reported in Section 4, the process of conducting the MSI helped improve communication and resulted in more frequent meetings of the DHMT.

> *"…looking at the level of communication we have on our [WhatsApp] platforms, I would say it is much better because now everyone is involved in communicating the challenges faced on the field."*
> (DHMT member, Ghana) [GCR p43]

> *"… in the beginning we did not have meetings, like you said, district health emergency meetings. But with this, the number of meetings have increased where, its where we try to*

solve most of the problems as a team."
(DHMT member, Malawi) [ONMW p.2]

Through the analysis of selected problems – especially those that started with problems linked to targets such as 'high rate of fresh still births'– district managers learned the importance of managing the performance of the workforce to improve service delivery.

> *"When analysing a problem, you find that you see the system like the health system, you cannot solve the problem, you alone as a health promotion officer. You will find that the root causes of the problem are with the human resource and with the administration … most of the problems you will find that the results are showing in your office but the root causes are somewhere else."*
> (DHMT member, Malawi) [UNMW p.3]

The fact that the DHMTs were working on problems they had selected themselves, and therefore were keen to address effectively, may have contributed to a culture change amongst the DHMTs:

> *"We had our own culture before the MSI because we were used to get something like lunch allowances, but with the coming of MSI we learned how to do without these resources, so we decided to integrate our services with other services that were already planned."*
> (DHMT member, Malawi) [UNMW p.5]

The DHMTs reported limitations to their management decision-making authority, especially with regard to access to funding [Uganda decision space report]. However, to overcome this problem, the DHMTs in Uganda used their authority to hire retired people to permanent posts, and the DHMTs in Ghana and Malawi were able to hire casual staff and pay them from the available funds in the district. They also managed to provide benefits for their staff in the form of motivational rewards such as paid study leave, training, allowances and recognition, as in Ghana and Uganda.

> *"… if a staff is really working hard, we have this platform that we use and we would recognise that person on that platform. It was in our plans that at the end of the year we would give out a little award to the people that performed well throughout the year."*
> *(*DHMT member, Ghana) [Ghana decision space report, p.30]

> *"… we have awarded certificates to good performers, we have recommended some people for trainings depending on the performance, so all those things we feel they are incentives for our workers and as a DHMT, so there we have some* [decision] *space."*
> (DHMT member, Uganda) [Uganda decision space report, p.31]

With limited resources the DHMTs in Uganda, and similarly in Malawi, relied on the existing implementing partners in the districts and were successful in mobilising and managing local resources to fund incentives and training and sometimes in recruiting staff.

> *"We are mobilising resources from our local partners that we have […] we have also a good example where the community mobilised resources until they have built two good looking, beautiful houses for the nurses and clinicians at Kansonga."*
> (DHMT member, Malawi) [Malawi decision space report, p.24]

The DHMTs used their available decision-space to negotiate issues where they have limited authority in the districts, such as some HRM functions. They organised transfers and secondments for certain roles to cover their staffing gaps and insufficient skills and capacity of some staff in health facilities. They allocated qualified people to support health facilities through providing on-site mentorship and in-service training. Expanding 'schedules of duties' in Uganda, 'job enlightenment' in Malawi or using

the clause in the job descriptions referring to 'any other duties assigned' in Ghana was also an approach used by the DHMTs to overcome the limited control they have over 'developing job descriptions', helping them to cover extra activities needed in the district.

> *"…we don't have any room to do adjustments but there is a clause that states that "any other duties assigned" and because of that clause we are able to chip in certain things even though it is limited but I would say we have some authority"*
> (DHMT, Ghana) [Ghana decision space report, p.22]

8. Improved workforce performance

Improvements in the performance of the workforce is not within PERFORM2Scale's sphere of control, as shown in Figure 4. However, we have reported on some changes in the establishment or improvement of certain performance management systems in Section 4. It can be assumed that if these performance management systems are used effectively this will lead to some improvement in workforce performance. Two examples of the effects – or possible effects - are reported from Malawi and another from Uganda:

> *"Mostly the health workers were taking things for granted, they were just concentrating on their job descriptions… Now with this induction, now the health workers are in a position to understand what are the rights and responsibilities of the clients."*
> (DHMT, Malawi) [ONMW P9]

> *"Yes, we did introduce the reward system and the performers are given a reward while non-performers are given sanctions. As I am talking now we have almost seven members that have been given some sanctions and that one has also assisted other members of staff to wake up and start performing*."
> (DHMT, Malawi) [ONMW p10]

In Uganda, one DHMT which had tried to address the problem of absenteeism in the first two MSI cycles, decided to focus on the poor quality of health worker performance plans in the third MSI cycle. This problem was addressed through training and support for the Health Centre IV (HCIV) facility managers and the provision of performance management tools, supportive supervision, setting up a reminder system for quarterly staff reviews, and annual performance appraisals. It was reported that in one secondary level health facility there is now more ownership of the performance management process. Effects observed included: 1) improved DHMT monitoring for workforce performance through collaboration between the DHMT and HR officer, 2) improved understanding of factors affecting individual health workforce performance through creating a sense of direction, health system-related factors, motivation and rewards, 3) improved skills in the development of key performance management tools, eg schedules of duty and performance plans [UCR p36].

Vertical scale-up pathway

9. User organisations convinced of the value of MSI (based on PERFORM and other examples)

The user organisations were the Ministries of Health in all three countries, as well as the Ministry of Local Government and Rural Development in Malawi and Ghana Health Service.

The PERFORM2Scale project had different starting points in each country as the PERFORM project, which piloted the MSI in three districts, ran in Ghana and Uganda only from 2011 to 2015. As such,

there were varying views on the value of the MSI across the countries and amongst the different stakeholders.

DHMT members who were involved in the PERFORM project in Uganda and Ghana, and representatives from the Central and Eastern Region Ministry of Health and Ghana Health Services were interviewed at the start of PERFORM2Scale. They recognised the MSI as a practical and effective project for enabling management teams to solve workforce performance and service delivery problems, such as low vaccination and antenatal coverage, which improved service delivery and helped them to become better managers. The approach to developing teamwork and collective responsibility was also valued. Stakeholders in both settings supported the idea of scaling up the MSI. In Ghana, national and regional stakeholders, as well as the DHMTs, suggested expanding the MSI in the original PERFORM region before its national scale-up, and that regional expansion and national scale-up successes rely on the generation and dissemination of evidence by the DHMTs and Regional Health Administration to key stakeholders. (GASUP1, p20; PERFORM lessons report p19).

In Malawi, as this was the first exposure to the MSI many stakeholders, including the NSSG, RT and DHMTs, needed more evidence and time to be convinced of the value of the MSI. However, based on evidence from PERFORM and from other experiences of management cycles and their work, stakeholders in Malawi were positive about the potential contributions of the MSI to strengthening district health management (ICA report p39).

As the project progressed, there was varying evidence of stakeholders remaining convinced of the value of the MSI. In Uganda, national-level stakeholders, including members of two Technical Working Groups (TWGs) – SMEAR (Supervision, Monitoring, Evaluation and Research TWG which later became Standard Compliance Accreditation and Patient Protection Department - SCAPP TWG), and the Human Resources for Health (HRH) TWG, identified the MSI as a quality improvement intervention, and particularly valued the human resources lens that it employed. The scale-up focused on institutionalising the MSI within the Quality Improvement (QI) Framework. This was not without its challenges, as there were initial doubts about the value of the MSI compared to existing QI interventions, with language about the MSI needing to be adapted. (UCR p49; UASUP3,p19).

> *"But what we have also found out is that some of the issues we are talking about, issues like teamwork, have also been present in the QI language and now they are also becoming more articulated in the current strategy. So, what we are building on is how to pick out some of those issues that are coming out from the MSI as a result, but presenting them as benefits that can actually now contribute to service delivery, not because they are countable but because they are as a result of performance management as well."*
> (Uganda NSSG) [UCR, p48]

In Malawi, as evidence from the MSI emerged and was disseminated, stakeholders also viewed the MSI as a quality improvement intervention. In Ghana, the DHMTs continued to value the MSI and used this approach to solve problems within their districts. Although the regional and national level stakeholders may have remained convinced of the value of the MSI throughout the project, there is little evidence of how this influenced the scale-up.

10. Scale-up infrastructure developed a) NSSG

NSSGs were established in the three countries in 2017 and 2018 following stakeholder analysis and engagement activities that identified those who would be interested and influential with regard to

the scale-up of the MSI and willing to be part of the NSSG. The NSSG membership in each country showed wide representation from different government ministries and departments.

However, there were several challenges with the functioning of the NSSGs. The assumption that the attention of key NSSG members was not diverted by other priorities did not hold true. The NSSG meetings were difficult to set up and when held were poorly attended. There was little engagement of members, at least not collectively, largely because they were very senior with many competing priorities. In all countries the NSSG was seen as either a parallel structure (Uganda) or an unofficial structure developed by the PERFORM2Scale project rather than owned by the MoH, and did not have clear reporting mechanisms to senior management within the MoH (Ghana and Malawi). In Malawi, power dynamics between the different members and their departments or ministries provided challenges to the functioning of the NSSG.

The PERFORM2Scale framework outlined the functions of the NSSG which included: working with the CRT to develop the initial strategy for scale-up (adapted from the overall strategy adopted for the project); identifying sites for district groups; identifying members of the RT; reviewing progress with the scale-up at regular intervals and revising the strategy; and developing funded plans for further scale-up beyond the end of the project. The NSSGs supported the initial strategy for horizontal scale-up, however, for various reasons, including limited functioning, they did not take a leading role in other functions, in particular the development of funded plans for further scale-up beyond the end of the project.

In Uganda, the limited functioning of the NSSG was addressed by appointing a focal person (FP) of the NSSG who became pivotal to all scale-up processes. He engaged MoH TWGs which included active members who were also part of the NSSG. These TWGs and the NSSG FP provided technical and stakeholder guidance to PERFORM2Scale, however, the forum for discussing and planning the scale-up strategy was limited, with most discussions taking place with only the NSSG FP. The NSSG FP was the main entry point towards integrating the human resource management lens in the QI framework and engagement with the QI department within the MoH.

In Ghana, frequent turnover of NSSG members also contributed to the limited functioning of the NSSG. The CRT recommended that a Regional Scale-up Steering Group be established alongside the NSSG, as regional actors were seen as being more engaged and could feed information to the NSSG. In addition, regional actors often move into more senior positions at the national level, and therefore can influence scale up at national level.

> *"If we have, for example, a district director or a regional program officer or director, who is actively part of the RSSG who has implemented an MSI program that has yielded good results, promoted to national or another region, it becomes easier for this person to also set up a team and continue with implementing the MSI process in that region or position."* (CRT, Ghana) [GCR, p85]

In Malawi, it took more time to establish the NSSG than in the other countries, partly because this was a new intervention, but also because it was not clear who should be involved and where to situate the NSSG. Once the NSSG was finally established, it did not function optimally. 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 [MCR p63]. The RT took on most of the role of the NSSG, including planning for vertical scale-up.

> *"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 officers that are*

always there and there are other officers that will miss at those meetings and reasons for not being available are not sounding."
(RT Member, Malawi) [MCR, p52]

11. Scale-up infrastructure developed b) Resource Team (RT)

Resource Teams were established in each country in 2017 and 2018. Team composition varied across the three countries, with the involvement of a mix of district, regional and national members. In Ghana, by August 2020 the RT was composed of regional health directorate members and DHMT members who had gone through the MSI in DG1 [GASUP3 p5 Table 1]. This was seen as being useful in facilitating better relationships between the regional directorate and the district, and improved understanding of facilitation of the MSI needed for scale-up. In Malawi, regional and national members were included, with some members added during the implementation of the MSI. In Uganda, the RT was composed of national-level actors who were lower-ranking officers from three MoH departments where the NSSG members work. In all three countries the RT was more stable than the NSSG, with low turnover of members, thus maintaining institutional memory of the MSI and scale-up.

There is an assumption that RT members would not be diverted by other priorities which largely held to be true. The RTs generally worked well for several reasons. They generally held less senior roles than those in the NSSG and were therefore more available to implement the MSI and were more accessible by the CRTs and DHMTs.

The assumption that there was sufficient assistance available from the RT to support the expansion of the MSI to districts groups partially held true. In Ghana, the RT members have the knowledge and skills to implement the MSI in other districts and sub-districts and can take on the role of championing the horizontal scale-up of the MSI.

"The trainings we have had with them [CRT], the visits that they have paid to us and a lot of activities that we have also carried out. These have all made us more confident […]. Now we can take people through the MSI cycle, how to prioritize your problems, the matrix used to prioritize your problems, and we can also share our experiences with them that we were able to yield results without any external resources."
(RT member, Ghana) [GCR, p86]

In Malawi, the CRT gradually handed over responsibility for organising and facilitating MSI workshops to the RT who became the "face of the project". However, there were differences in competencies across the RT members. Not only did the RT support the horizontal scale-up, but they also supported the vertical scale-up of the MSI by developing the draft scale-up strategy and engaging with the NSSG and Quality Management Directorate. In Uganda, the RT members were actively engaged in the planning and implementation of MSI activities in the districts, and in particular provided expertise on technical issues, such as health workforce performance, which the DHMTs valued greatly. However, they were too busy to take over the day-to-day running of the MSI from the CRT. Nevertheless, their seniority enabled the facilitation of the integration of the MSI in the QI framework, thus playing a critical role in the vertical scale-up.

To ensure that RT functions are conducted beyond the end of the project, integration of (elements of) the MSI into existing structures (through the NSSG or other structures) is necessary. This is context specific. For example, in Uganda, aspects of the MSI have been integrated in the QI framework and other structures/ persons would take up the role of facilitation of the MSI

components. In Malawi, the RT function should be taken over by officers in the Quality Management Directorate Satellite Offices.

12. Scale-up infrastructure developed c) scale-up strategy

There are two components of the scale-up strategy. First, the expansion of the MSI across districts as per the horizontal plan developed at the start of the project with the NSSG and RT, which is funded by the PERFORM2Scale project. Second, the scale-up strategy, which was worked on throughout the project, which includes what happens beyond the initial horizontal scale-up and after the end of the project, and incorporates the concepts of handover and funded absorption of the MSI into structures and policies.

All countries drafted scale-up strategies. These were intended as "living" documents that have evolved over a long period of time but are not finalised nor accepted by the NSSG in Ghana and Malawi. In the first few years of the project, most attention was paid to the horizontal scale-up of the MSI (expansion of the MSI across the districts), with less attention given to the development of the scale-up strategies until 2019. The process has largely been driven by the CRTs, instead of the NSSGs and RTs, partly because of the limited functioning of the NSSGs. The CRTs held discussions with the NSSGs or RTs in all settings to discuss areas of the strategy. These included: the vision for scale-up over the next five years; adaptations to the MSI; scope for horizontal scale-up, such as numbers of districts and pace of scale-up; strengthening of the steering group and plans for embedding the MSI into existing structures, policies and plans; identifying and working with stakeholders and champions for scale-up support; resources required and mobilisation strategy; and monitoring and evaluation. The intention was to further develop the scale-up strategy with NSSG members in Consortium Workshop 5 in March 2020, but the COVID-19 pandemic hit and the consortium was not able to meet in-person to drive this forward. Virtual meetings continued, but these were hampered by getting people together online, and NSSG and RT members having to prioritise work on the COVID-19 response. The draft strategies include some of the elements listed above, but no monitoring mechanisms, milestones or indicators, and limited stakeholder engagement and advocacy plans are included in relation to the vertical scale-up.

In Ghana, the horizontal scale-up strategy for rolling out the MSI in nine districts in the Eastern Region was developed and adopted quickly. However, it took a long time for the CRT and RT to develop the vertical scale-up strategy, with suggestions of establishing a RSSG, and integration of the MSI into regular DHMT refresher training and RHA routine support activities only recently (in February 2020) put forward. The strategy is yet to be validated by the NSSG and other stakeholders and will need to be approved by the Director General of GHS and the MoH.

> *"We are not supposed to take the front role of the NSSG. They started with us by drawing the plan to do the scale-up and then later they stopped honouring our meetings - that is the problem. They have to champion it as the NSSG, we, as the CRT cannot champion it at that level. We are willing to support them, provide what they need and facilitate a meeting and all that, but they have to draw up the plans to disseminate and to scale-up. And they have to be available to do that, and it is their availability that has been a problem till date."*
> (CRT, Ghana) [GCR, p87]

In Malawi, the scale-up strategy was drafted by the RT, QMD and the CRT with the NSSG showing commitment to adopting the document. QMD's drive led to the integration of parts of the

PERFORM2Scale situation analysis tool - human resources, health financing and gender information - in the nation-wide Integrated Supportive Supervision tool, as a major and sustainable scale-up step. The satellite offices of the QMD are proposed as hubs for the scale-up, with the offices' quarterly review meetings accommodating both MSI workshops 1 and 2 as well as the inter-district meetings. However, satellite offices are not yet functioning across the whole country and there are concerns about how and if the satellite offices will adopt this role. As part of the scale-up strategy, all satellite offices will need to be introduced to the MSI if it is to fall under their remit.

In Uganda, the development of the scale-up strategy took about 3-4 years in close collaboration with the NSSG focal person, the RT and the CRT. It was regularly updated following TWG meetings to improve implementation and coordination at the centre and generate buy-in from policy makers and potential funders. The strategy describes the existing quality improvement and assurance structures providing governance oversight at the national level - the Quality Assurance and Improvement (QA&I) or SCAPP department. It also outlines structures at the regional level - the Quality Assurance and Improvement (QA&I) Committees and Community Health Departments (CHDs) within the 14 regional referral hospitals supporting implementation. The health workforce performance component of the MSI is included in the newly-approved nationwide QI strategic plan and framework. However, there are concerns around capacity of the CHDs and QA&I committees to implement this as well as its acceptance at the regional level.

13. Champions emerged who support and advocate for MSI scale-up

Champions emerged but only from within a small circle close to the project who support and advocate for the MSI scale-up. This is related to the assumption that new knowledge on the MSI lessons is sufficiently well documented and disseminated to relevant stakeholders. MSI lessons were documented in numerous workshop reports, scale-up reports and country project briefs. Lessons were disseminated to some extent: only two project-specific dissemination workshops were held (one in Uganda and one in Malawi); presentations and discussions were held at MoH TWGs in Uganda and in various fora in Malawi. Costing data were not available at an early stage of the project; presenting the MSI as a low-cost intervention early on, might have been attractive to government stakeholders and donors. There was limited stakeholder engagement and advocacy throughout the project, despite a stakeholder engagement plan being developed in the first year of the project and updated annually. The vision for the scale-up was developed as part of the scale-up strategy late in the project as described in Section 12. Without this clear vision early on, it was difficult to engage stakeholders as champions. More champions may have emerged if annual national workshops had been held as planned in the PERFORM2Scale framework, or had been more successful. In these workshops, it was intended that a wide group of stakeholders would come together and discuss the findings from the project so far, including successes, challenges and lessons learned in the scale-up. Learning to think and work politically is critical to identifying and developing champions, including better understanding stakeholders' interests, relationships and networks, power and influences. A clearer 'picture' of what a champion is and what they do, including the difference between being convinced and supporting the intervention versus actively lobbying for scale-up, is needed earlier in the project to support the identification and use of more champions. This understanding developed as we progressed in the scale-up.

In Ghana, champions of scale-up were identified as being DHMT members exposed to the MSI, the previous Regional Director of Health Services and the new Regional Director of Health Services. These champions advocated for the scale-up of the MSI at a small scale, mostly through sharing

experiences of the MSI. There were other potential champions, including NSSG members, but challenges with the functioning of the NSSG affected their ability to be champions. The Regional Director was part of the NSSG but left to become the Director of the Policy Planning and Monitoring division of GHS and as such could have played an important role in the scale-up at national level, but despite attempts to engage this director, busy schedule and other priorities got in the way. The Director General of the Ghana Health Services was also identified as a potential champion. A more formalised and strategic approach to advocacy and the development of champions was absent.

> *"So yes, I agree that we have people who are champions at their various levels for the MSI, but as to how we would put their roles as champions in a strategic way is what we should consider. For the people we have identified them but as to the skills and how they can champion for a successful scale-up is what, maybe we are lacking. (…) We may see ourselves as champions, but we may not have the adequate skills to actually go into the scale-up, when it comes to scale-up issues."*
> (RT member, Ghana) [GCR, p91]

In Malawi, some RT members, Directors of Health and Social Services who head the DHMTs of well-performing districts and members of the Quality Management Directorate were identified as champions. The Quality Management Directorate was a newly-developed directorate that was striving to make an impact, and supporting PERFORM2Scale was seen as an opportunity to foster a new approach suited to their remit. However, power dynamics with other directorates impacted the scale-up progress. The former chair of the NSSG was a champion of the scale-up but was transferred after the new government was formed in 2020. This illustrates the political influence on implementation and scale-up of programmes.

The NSSG focal person was a strong champion of the scale-up process in Uganda. He was strategically placed to inform and guide the CRT on scale-up because of his previous engagement as District Health Officer in the PERFORM project, previous position in the MoH QI department, previous chair of the SCAPP TWG and current position as director of governance and regulation and chair of the Senior Management Committee of the MoH. He self-identified as a champion for the MSI and was seen by the RT and the CRT as such, and indicated he was willing to continue advocating for the MSI even after the project ends. Some RT members were also identified as champions.

14. Wider group of stakeholders convinced of the value of MSI scale-up

As there was a limited number of champions in each of the countries and given the challenges with the functioning of the NSSG, it was difficult to convince a wider group of stakeholders about the value of the MSI scale-up.

There were some stakeholder engagement activities such as: presentation of the MSI at the Annual Quality Improvement conference in Uganda; meetings with UNICEF and the Clinton Health Access Initiative to identify common areas and harmonise the management strengthening approach for the DHMTs in Malawi; and presentation and discussion of PERFORM2Scale at the Eastern Regional Annual Review Meeting in Ghana, where other districts in the region expressed interest in joining the programme. (UASUP3, MASUP3, GASUP3)

However, opportunities for stakeholder engagement were not always identified and optimised in order to share evidence of MSI outcomes and convince stakeholders of scale-up. As decentralisation progresses or changes in contexts occur, these stakeholders also change. This requires observation and scanning of the horizon for new and important stakeholders. This was part of the stakeholder

engagement plan and annual reviews and revisions, but was not always acted upon for several reasons, eg the annual national workshops were planned but did not happen. Stakeholder engagement was also significantly hindered by the COVID-19 pandemic in all three countries.

Evidence is needed to convince stakeholders of the value of the MSI scale-up. Although we were able to provide compelling narratives on improvements in management, health workforce and service delivery, it was more difficult to provide robust quantitative data to support these narratives. Stakeholders in all countries are more familiar with or prefer quantitative evidence, but this is difficult to provide for complex interventions like the MSI. Gaining stakeholder support where it is challenging to demonstrate tangible and measurable benefits, may be difficult when competing with other clearly proven interventions.

> *"The other challenge [...] is that evidence would be appreciated more if it was quantitative. And every time they asked us for evidence, they wanted to see numbers. But the issue which we learnt over time is that management is a bit complex in a way that it does not necessarily always give you numbers, it only gives you proxies and what matters in management is mainly the processes that happen around that actually contribute to the service delivery."* (CRT, Uganda) [UCR, p50]

However, it is not only evidence that plays a role in convincing stakeholders of the value of the MSI scale-up. It also depends on the mandate and position of the stakeholders and how they are viewed by others.

In Ghana, gaining the buy-in of the Regional Director of Health Services in the early part of the MSI scale-up facilitated horizontal scale-up across the region. However, it is clear that the national-level stakeholders relevant for the scale-up were not yet fully convinced of the value of the MSI. Evidence supporting scale-up was available but despite numerous attempts to get the PERFORM2Scale MSI on to the agendas of national fora, eg the annual Health Summit, annual review meetings and the research directorate dissemination events, this has not been adequately shared. Lack of engagement of the NSSG along with the COVID-19 pandemic hindered these opportunities.

> *"We have all agreed that we have gathered enough evidence to support the scale-up of the MSI in other districts but then we still have a few more steps to go, like what we have just discussed, to talk to the major stakeholders involved with the scaling-up of the MSI."* (RT member, Ghana) [GCR, p89]

In Malawi, PERFORM2Scale and its MSI were aligned with national political interests and policies in improved leadership and management at the district level. This supported implementation of the scale-up strategy. The Quality Management Directorate was convinced of the value of the MSI scale-up and because the director was well-respected within the MoH, and the MSI was within his remit, he was able to steer the scale-up with little involvement of the Senior Management Team or principal secretaries of the MoH and the MoLGRD. However, to get further support, which is essential for the scale-up to be implemented, more information needs to be provided to wider groups of stakeholders including FCDO, USAID, UNICEF, WHO and GIZ, who are critical to sustainable scale-up as they have influence over the health sector, particularly through the allocation of funds. Meetings with UNICEF have taken place, which provides a platform for further discussion. However, it is difficult for PERFORM2Scale to garner interest and work together with donors and development partners, perhaps because of PERFORM2Scale's limited resources within a competitive environment where stakeholders have their own agendas to push.

In Uganda, it was clear that not all stakeholders were on board with the scale-up of the MSI. It took time, evidence and discussion to change people's views on the MSI as described below:

> *"The current (Human Resources) commissioner who has come on board is a very senior person, has worked in the sector for very long and has worked in different ministries and they have tried so many approaches to improve on workforce performance, maybe sometimes without success. So he came on board with that belief that it's not possible, but we managed to sit him down and have one [meeting] with him, to give him the evidence available and in my view, his view is changing. It has not totally changed but his view is definitely changing."* (NSSG Uganda) [UCR, p51]

Some were not convinced of the differences between existing quality improvement cycles and the PERFORM2Scale MSI. Being able to highlight how the MSI was contextually appropriate became a critical facilitating factor in the merger of some aspects of the MSI into the QI cycle. The NSSG FP emphasised this further by stressing that the "science of improvement through PDSA on QI was already there". By re-imagining the scale-up of the MSI in terms of integration, political will for 'continuing' QI interventions like the MSI was largely seen as being present. One RT member shared:

> "*The decision makers, they are also interested in improving the quality of care, that is their area of responsibility, so, any opportunity that is available for improvement, it is usually welcome. And many times, it is what we see when we go to these different structures, we present our proposals for areas of support, and our political leaders have been very supportive throughout for the other areas of quality of care. The minister for example has been attending the quality improvement committee meetings herself throughout."* (RT, Uganda) [UCR, p49]

Furthermore, the QI framework fits within the broader intention of the MoH to devolve some health system responsibilities to decentralised regional levels. Although these regional QI structures may not be operational yet in all districts, the government intends to strengthen human resource performance at these levels. While additional resources for appropriate implementation in all regions need to be secured, the QI framework itself does have some budget attached to it (and there has been a clear precedent during the last five years for funding QI interventions), which will likely make resourcing the hybrid PDSA (Plan, Do, Study/Check/Reflect, Act) cycle easier than if it were a new, standalone intervention. [UCG p49]

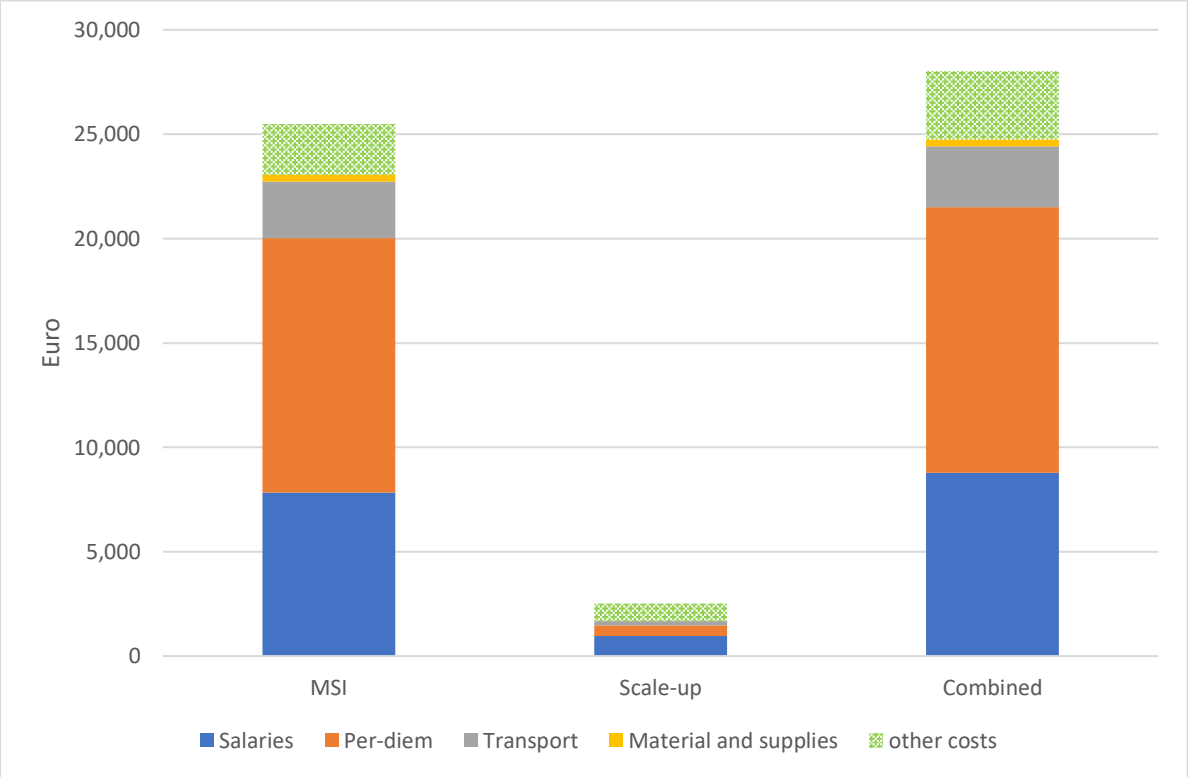
15. National/regional resource allocation and scale-up infrastructure support existing MSI cycles and ongoing scale-up

Specific financial resources for scale-up have not been allocated yet in Ghana, Malawi and Uganda. There is therefore a need to intensify engagement with donors and development partners after the end of the project. In Uganda and Malawi, where components of the MSI are to be integrated into existing frameworks, funding needs to be assured for the implementation of the existing frameworks and activities rather than the scale-up of the MSI per se.

Calculated costs indicate that the implementation and scaling-up of the MSI are comparatively inexpensive, but this is not enough; political commitment to scale-up is required. Information on the costs of the MSI and scale-up have not been disseminated to stakeholders; this could be used in discussions on the feasibility of continued scale-up.

Based on the cost data from 16 completed MSI cycles, the average cycle cost was €84,000 per country with a range of €63,000 (Ghana) and €106,000 (Malawi). For a single district this corresponds to an average of €28,000. Figure 9 indicates that over 90% of these costs arose from the MSI activities. Most of the costs for the MSI and scale-up were for salaries and per-diems. These two cost items corresponded to 63% (Uganda), 82% (Malawi) and 86% (Ghana) of total costs.

Figure 9. Average cost of MSI and scale-up by district and cost category

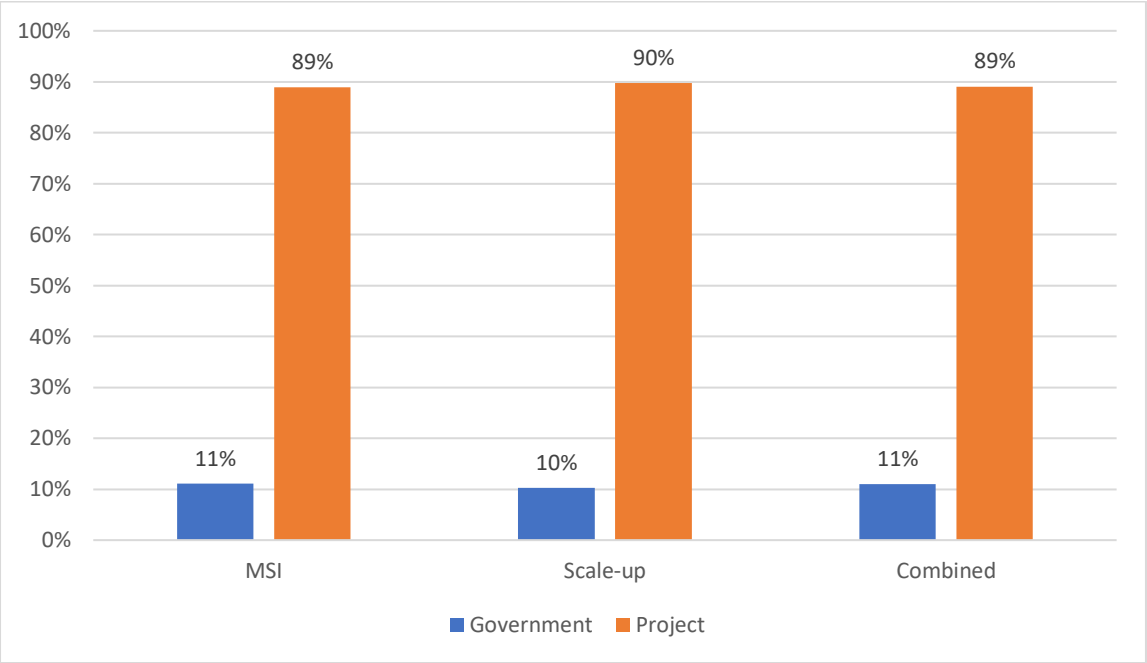


Salary costs for government staff in total were €9,200 per country and €3,100 per district. This is about 11% of the total cycle costs (Figure 9). This is relevant for the future implementation of the intervention as the government salary costs for a cycle are quite a small proportion of the total average cycle costs. On one hand, these costs can be considered sunk' costs, on the assumption that the government would pay this amount with or without the intervention, unless they would hire additional staff for this. This makes these costs somewhat less essential in the cost analysis.

In Figure 10, 89% of costs were covered by the project. In absolute terms this corresponded to €74,846 per cycle respectively or €24,949 per district. The 'project' costs contain amounts paid to both the CRT as well as costs for the DHMTs, NSSG and RT.

A comparison of the project costs with other interventions is difficult as the MSI and scale-up are unique and cannot easily be contrasted with interventions such as the distribution of bed nets or vaccinations at district level.

Figure 10. Coverage by government and project of average costs of MSI and scale-up



However, an average cost of €25,000 per district and cycle is small compared with other complex health systems interventions. The Improving the Health of Children in Uganda: Community and District Empowerment for Scale-up (CODES project - for further information see https://www.acode-u.org/Files/Publications/CODES-Project.pdf) estimated the costs of scaling-up a management intervention. A full-scale-up with substantial technical support was estimated at an annual cost of US$51,250 per district. A scale-up of key interventions with medium technical support was estimated to cost US$18,000 annually per district. A 'bare-bones' implementation was estimated to cost annually US$5,800 per district[7].

Within the Ghana Essential Health Interventions Program in northern Ghana (GEHIP - for further information see https://www.publichealth.columbia.edu/research/advancing-research-community-health-systems/ghana-essential-health-interventions-programme) the focus was on community-based primary healthcare strengthening that emphasised the importance of enhancing district leadership capacity for effective systems functioning[8]. The annual economic costs (without the research component) was US$4 million for the three districts, and more than US$1 million per district, which is substantially higher than the costs for PERFORM2Scale.

Further, the volume of costs used by the CRT potentially provides substantial opportunity to achieve efficiency gains. Gains can be realised by reducing the amounts needed to be paid for project technical support and project own salary costs on the assumption that substantial expertise has already been gained by government health officers, in particular DHMTs and RT members, thus

[7] Waiswa P, Mpanga F, Bagenda D, et al Child health and the implementation of Community and District-management Empowerment for Scale-up (CODES) in Uganda: a randomised controlled trial *BMJ Global Health* 2021;6:e006084

[8] Kanmiki EW, Akazili J, Bawah AA, Phillips JF, Awoonor-Williams JK, Asuming PO, et al. Cost of implementing a community-based primary health care strengthening program: The case of the Ghana Essential Health Interventions Program in northern Ghana. *PLoS ONE* 2019; 14(2):e0211956. https://doi.org/10.1371/journal. pone.0211956.

reducing the need for external support. These gains can be assumed to be even greater where the intervention continues in already experienced districts. For example, the multi-pronged, evidence-based Supervision, Performance Assessment, and Recognition Strategy (SPARS) of Uganda which aimed to improve management of medicines at health facilities. This strategy was implemented between 2011 and 2014, with an annual cost estimated at US$760,000 for nationwide implementation. In 2013, there were 116 districts in Uganda, thus the cost per district per year is estimated to be US$6,552[9].

To conclude, PERFORM2Scale shows that for actually quite small investment sums, substantial management improvements can be made in delivering public health services

The infrastructure for scale-up is not yet in place in all settings but there appears to be potential in Malawi and Uganda. In Malawi, the plan is to implement the MSI using the QMD satellite offices. In Uganda, the human resource management focus of the MSI is included in the new QI framework (Ministry of Health Uganda. National Quality Improvement Framework & Strategic Plan 2021-2025) with the regional-level QI teams implementing the human resource management focus within the QI cycle. The Uganda CRT plans to be involved in the training, mentoring and support of the Community Health Department personnel at the Regional Referral Hospitals to support districts in human resource management for QI. [Malawi Validation Workshop report]

In Ghana, there is currently no evidence of political and financial support for the scale-up and this is due to a lack of a clear vertical scale-up approach/strategy, and limited activities taking place to engage with relevant national-level stakeholders.

In Malawi, the scale-up strategy has senior MoH support, but its successful implementation depends on how well the MSI workshops can be integrated into the satellite structure and quarterly review meetings, and on getting enough financial support to make this happen. There is a need to intensify engagement with donors and development partners to fund the additional two days for the MSI in the quarterly satellite review meetings which will adapt the experience sharing and learning nature of the inter-district meetings. Implementation of the scale-up strategy will also be dependent upon the functionality and acceptability of the Quality Management Directorate satellite offices. At present, though the satellite offices are functional, there is some resistance to their use with some being ignored by the District Council. There remains uncertainty over the future of the offices because of the power play between the Quality Management Directorate and Department of Planning in the MoH, and because the MoLGRD is officially responsible for leadership and management at district level. Before the institutionalisation of the MSI can take place, more clarity on the roles and responsibilities of satellite offices towards DHMTs and other sectors is needed. [MCR p64]

In Uganda, integration of the human resource management (HRM) focus of the MSI into the QI framework brings several opportunities. However, there are some challenges in implementing the framework. The regional QI teams will take a leading role in implementing the QI cycle, but only a few of the 14 regional-level teams are currently active and appropriately skilled to facilitate these cycles. Therefore, the NSSG FP and CRT stressed that the scale-up strategy should include a focus on strengthening capacity in regional QI teams. The intention is that these teams will eventually take on a role similar to a regional RT. [UCG p52.] Adequate financial support for the new QI framework also

[9] Kwesiga et al. Costs and effectiveness of the supervision, performance assessment and recognition (SPARS) strategy for medicines management in Uganda, *Journal of Pharmaceutical Policy and Practice*, 2019; 12:36 https://doi.org/10.1186/s40545-019-0196-8

remains an unanswered issue. There will be some government budget for full implementation of the QI strategy in all regions, but additional resources from development partners may be needed. The NSSG FP explained that approval of the new QI framework may act as a tool for additional resource mobilisation from these partners, which may secure funding for MSI elements.

16. Health polices and plans include MSI

The degree to which the MSI is integrated into health policies and plans differs in the three countries.

The human resource management component of the MSI is included in the new QI framework in Uganda. However, the operationalisation of this HRM component would still be a challenge because of limited resources in the health sector in general, and gaps in capacity to implement the adapted intervention. This presents a further opportunity for learning about implementation and the sustainability of adapted interventions that have been embedded within existing structures. [UCG p60]

In Malawi, the CRT alongside the NSSG and RT are in negotiation with the QMD to include the MSI in the QMD satellite offices' work and DHMT quarterly review meetings. It has been endorsed that the satellite officers will take on the MSI. In addition, the MoH Directorate of Planning is planning to engage the satellite officers to have oversight of the district implementation plans using the 12-month cycle. As indicated, this requires financial resources from the MoH, which is dependent on the support of international development partners.

Currently there are no concrete plans to integrate the MSI into a policy document, budget, training curriculum or guidelines in Ghana, but discussions are ongoing.

17. Expertise for scaling up is applied to other health systems areas

Whereas the PERFORM2Scale project focused on scaling-up the MSI, lessons on scale-up per se could be applied to other areas or interventions within the health system that need to be scaled-up. For example, scaling-up areas of COVID-19 management, such as testing, health promotion and specific clinical interventions.

There is no evidence from the three countries that knowledge and skills of scaling-up have yet been or are being applied to other systems areas. There may be several reasons why expertise on scale-up has not been shared, which include that it is too early in the process. Consortium members and stakeholders, like the NSSG and RT, are just processing the lessons learnt and recognising the expertise they have developed now. Opportunities for applying the new knowledge on scale-up will need to be explored in the current or imminent scale-up activities in the health sector. One possible opportunity to share knowledge about scale-up is to include it in the teaching curricula of institutions in the consortium, such as the University of Ghana School of Public Health, Makerere University School of Public Health, LSTM, KIT, Maynooth University and Trinity College Dublin, and other educational institutions beyond the consortium.

> *"With them [CRT] being a university, they may find a way to make it an added course or a short course, or something that can be plugged into the School of Public Health activities, because in the end the School of Public Health trains a lot of our managers. So, in the end I*

believe it would be very good to start with them."
(NSSG member, Ghana) [GCR, p84]

The Consortium has published papers on scale-up and others are currently being developed. We are developing other products such as briefing papers and a MSI toolkit for wide circulation. We are also holding global and national dissemination activities.

Overall outcome

18. Improved service delivery and UHC

Our Theory of Change assumed that the DHMT would remain the key organisational structure at sub-national level in order to provide the benefits from the MSI to service delivery and ultimately UHC. This assumption has largely held true, though we have learnt of the greater importance of the local government structure at district level in Uganda and how this is evolving in the still fluid process of decentralisation in Malawi. As described above, the DHMTs continue to function as teams with relatively low turnover and sufficient decision space to implement much of their plans. As their workplans are designed to support service delivery, the MSI has not been a distraction.

In fact, there is evidence of improved service delivery in the three countries from the data collected by the DMHTs in the process of monitoring the implementation of their workplans. They reported increases in health service coverage in all three countries, eg antenatal care coverage in Uganda, Ghana and Malawi, tuberculosis cure rates in Uganda, neglected tropic disease detection rates and outpatient attendance rate in Ghana. This implies an increase in access to services, although we have no data disaggregated by equity indicators, such as gender or socio-economic status, that support improvements in equitable access to services. We did not measure service delivery quality.

Improvements in access to services were shown in one district in Ghana which selected the problem of low outpatient department (OPD) attendance. By strengthening Community Health Committee meetings and the regular engagement of health staff with the community, outpatient attendance increased, as well as community participation in health campaigns, such as mass drug administration for neglected tropical diseases. These improvements were recognised in the annual district review and resulted in that district being awarded 'best performing district in the region'. [GCR p27]

> *"The MSI pushed us to do more which increased our OPD attendance and general performance. And I must say we won the best district in the whole of the Region for 2020."*
> (DHMT member, Ghana) [GCR, p47]

In Malawi, for example, in one district full immunisation coverage of children aged under 5 years increased from 24% to 82% between January and June 2021. Hospital delivery and antenatal care rates also increased. [MCA p 120 Malawi Case study – Annex 1 to the Country report].

In Uganda, for example, one district focused on tuberculosis, and during one MSI cycle the cure rate increased from 20% to 41%. In another district, the percentage of fully-immunised children increased by 20% despite challenges related to COVID-19. (UCR p 24).

> *"TB was one of the worst, but we also had some other performance indicators. So, when we reflect and look at our data, it is now beginning to speak to us that when you improve workforce performance, then health indicators improve. […] TB cure rate has improved because […] the indicators are showing a positive trend in the district."*
> (DHMT member, Uganda) [ONUG p6]

Improved service delivery and UHC are distal outcomes in our Theory of Change and are beyond our sphere of control, and it is challenging to attribute improvements in service delivery and UHC to the (scale-up of the) MSI. There is evidence that the MSI has strengthened management practices of the DHMTs and workforce performance systems as described in Sections 3 and 7. This should, in theory, improve workforce performance, but there is only weak evidence to support this improvement – see Section 8. Workforce performance improvements should logically contribute to improvements in service delivery.

Discussion

Our research confirms the earlier reports of PERFORM (Martineau et al 2018) that the MSI is an effective intervention for management strengthening. In fact, the opportunity to carry out multiple cycles within the project period showed how learning could be deepened, demonstrating a relative advantage over some other methods of management strengthening. The intervention did not need extra implementation funds – in fact, this was seen by many as a positive attribute – and the DHMTs reported that the MSI actually contributed to some improvements in workforce performance and service delivery in line with their broader workplans. The MSI was guided by a detailed toolkit, yet it was adaptable to local needs in terms of timing, duration of cycles and the nature of workshops and support meetings.

The MSI was relatively simple to install and implement and with the combined efforts of the CRTs and RTs the project was able to provide DHMTs with the capacity to use the MSI approach, to achieve significant horizontal scale-up, and to conduct the MSI in 27 districts spread across three countries over a period of four years. This included running the MSI through up to three cycles in some of the earliest districts to be engaged. The MSI was seen as sufficiently useful and attractive for DHMTs to want to participate initially and then continue for subsequent cycles. National and sub-national (particularly in Ghana) decision-makers were able to plan the horizontal scale-up process in a rational way that met their needs. These decision-makers were also able to identify RT members to work with the CRTs in the implementation of the MSI and its horizontal scale-up. The major hindrance to the horizontal scale-up was the arrival of the COVID-19 pandemic in March 2020. This prevented the MSI support activities (workshops, visits, etc) from taking place and understandably diverted the attention of the DHMTs from the implementation of their workplans. Many of the participating DHMTs picked up the momentum for the MSI before the end of the project, implying that the approach was sufficiently embedded in their way of working. This was further demonstrated by the application of the approach to COVID-19 related tasks.

The RT played important and different roles in the three countries – some facilitating the MSI, and others helping to steer the vertical scale-up. The composition of the RT may need to be different in light of the choices for vertical scale-up, as seen in the adoption of the Quality Improvement structures in Uganda and Malawi.

The work of the CRT is a significant facilitating factor in both the horizontal and vertical scale-up of the MSI. The CRT performed the dual roles of researchers and implementation support practitioners, which required knowledge and skillsets, as well as a deep understanding of the context, stakeholders and power relations. Without this type of implementation software work, progress with both horizontal and vertical scale-up would not have been possible.

The journeys of the vertical scale-up of the MSI beyond the project period have differed across the three countries - much more than the horizontal scale-up in the first four years. All countries started

with letters of agreement for the project at the time of proposal submission (early 2016) though the project did not properly get underway until mid-2017, and two countries – Ghana and Uganda – had first-hand experience of the intervention from the PERFORM project. The concept of the 'user organisation' or NSSG and its role of adopting and implementing the MSI at a larger scale beyond the lifetime of the project was more challenging. In the original version of the Theory of Change we had included this stage within the 'sphere of control' of the project, but as the project progressed we realised that this was not so much under our control but more within our 'sphere of influence' (see Figure 4). The original assumption was that NSSG members needed to be high-level managers to be able to make decisions, but this meant they were mostly too busy to be sufficiently involved in the project at the early stages (with the possible exception of in Malawi where the project was linked to the Quality Management Department). In the middle of the project, when the initial ideas for the longer-term strategy needed to be developed, for numerous reasons, including turnover of members, it was difficult to bring NSSG members together to have these discussions. In Uganda, existing structures, such as the Technical Working Groups, were used instead of the NSSG. In addition, the MSI concept was not easy to sell to wider stakeholders or to get support from champions, possibly partly as no specific funding was attached to it. The impact of management strengthening is difficult to demonstrate as the effects take some time to be seen. Also, unlike less complex medical interventions, it was difficult to demonstrate the direct impact of the MSI on service delivery, with quantitative evidence and costing data not available at opportune times to demonstrate value-for-money. Some stakeholders failed to see a significant difference between the MSI and quality improvement cycles, for which there were established programmes. Progress towards developing the scale-up strategies and handover plans in early 2020 was thwarted by the pandemic and the associated distractions. Nevertheless, elements of the MSI were successfully incorporated into the QI cycle in Uganda, while Ghana and Malawi have continued to pursue plans to continue with variations of the MSI. A stumbling block for the continuation of the MSI or variants of the intervention is resources. As yet, no funding has been secured in any of the countries.

This brings us back to the role of the user organisation – what we call the NSSG – in the process of scale-up – the "institution(s) or organisation(s) that seek to or are expected to adopt and implement that innovation on a large scale" (WHO/ExpandNet 2010, p6). In Uganda, using a context-appropriate alternative of existing structures, ownership of elements of the innovation was achieved and they were absorbed into the Quality Improvement strategy, though no funding has yet been identified for the implementation of this strategy. In Malawi the QMD was quick to take ownership of the innovation and has adapted it to current planning cycles and the arrangement of meetings attended by the DHMTs, but has not been able to secure funding yet. In Ghana, the innovation was appreciated within the Eastern Region, but funding decisions need to be made at the central level and there was no effective high-level body to advocate for continued funding.

The lack of sustained expansion of the management strengthening intervention as it was actually planned, may be partly due to the sequencing of the scale-up and the nature of the project to support it. By 2015, the PERFORM project (supported with EC research funds) and stakeholders in Ghana and Uganda realised that the MSI could have a greater impact if it were scaled-up. Some members of the original consortium, joined by new members, including a Malawi research organisation, submitted a proposal for the PERFORM2Scale project in early 2016. It was assumed that the five years funded by the EC would be sufficient to achieve a sustainable scale-up strategy. The proposal had letters of support signed by individuals on behalf of each of the three MoH. There was then a gap of nearly two years before the MSI started to be implemented again in Ghana and Uganda, by which time the benefits of the MSI under PERFORM may have been forgotten, due to staff turnover and other factors. In Malawi there were no such memories. The focus was

understandably on selecting the sites for the first district groups for implementing the MSI, rather than reviewing whether there was still a strong demand and support for the MSI. Because of the nature of the funding of PERFORM2Scale, it would have been difficult for an implementation research project – rather than a development project - to make radical changes to the project at this point if the support was not there. A different type of project designed with clear breakpoints (possibly at the time when the Initial Situation Analysis was carried out, or shortly afterwards) – might have been able to ensure that the establishment of a functional NSSG (or equivalent) with a clear mandate to "adopt and implement the innovation on a large scale" was a condition to proceeding with the project. In this situation the project would be following ExpandNet's mantra of 'begin with the end in mind' (WHO/ ExpandNet 2010).

Critical reflection on the PERFORM2Scale project

PERFORM2Scale is a complex project with multiple components of the MSI, scale-up and the research, in three quite different contexts and with multiple partners. Managing and coordinating such a complex project is not without challenges. Just as ideas for vertical scale-up were beginning to emerge in early 2020, the work itself was put on hold due to COVID-19 and we never regained the opportunity to meet face-to-face as a consortium and to share knowledge about scale-up experiences. Though we did make good use of Zoom webinars and workshops for communication, this was very much a second-best option.

We used a range of qualitative and quantitative methods to evaluate the project which we draw upon in this report. However, there was limited independence of the evaluation process, although the use of multiple methods to triangulate findings and cross-checking by different consortium partners helped to reduce bias.

We used the Theory of Change as a guide for monitoring and evaluating the implementation and scale-up of the MSI in Ghana, Malawi and Uganda, as well as to frame this synthesis report. There are two pathways in the Theory of Change, for the MSI and the scale-up. The pathways are interlinked and not necessarily as synchronous as might be implied by Figure 4; for example, it was only after several cycles of the MSI that DHMTs gained the skills, confidence and independence and only then could their experiences really support the emergence of champions. Therefore, it is challenging to present synthesised evidence for each outcome, without referring to other outcomes and assumptions. This reflects the complexity of the project and the real-world situations in which the study took place.

Key lessons of the MSI:

- The MSI is an effective intervention for management strengthening and can contribute to improved service delivery.
- Deepening of DHMT learning occurs through multiple cycles.
- It was confirmed that the intervention works despite – or even can benefit from – the absence of extra implementation funds, with DHMTs strengthening their management competencies to become more resourceful and responsive to local needs.
- The MSI provides opportunities for district managers to come together to share experiences, learn from each other and overcome challenges.
- It was possible to adapt the intervention to better fit with local needs and budget cycles and expand participation, such as the involvement of a wider group of district stakeholders in the MSI.

- The flexibility given to districts leads to different solutions and approaches. This in turn results in diverse patterns and situations making outcome monitoring challenging (eg in terms of service or health systems improvement).

Key lessons of scale-up:

- It is possible to effect considerable scale-up of a complex intervention if the intervention is valued and funds are available for scale-up.
- However, scale-up is not a linear process, it is a bumpy road with advances and set-backs along the way, with a range of factors interacting to influence scale-up.
- Critical to successful vertical scale-up is having a clear, shared vision among the different stakeholders involved about how to institutionalise (components of) the intervention into existing systems. It takes times to develop this shared vision. Then this vision needs to be translated into a strategic plan for scale-up.
- Without vertical scale-up, horizontal scale-up will stagnate and vice versa.
- The ExpandNet approach, adapted for PERFORM2Scale, provides a good guide for scale-up, which needs to be flexible to the context and should be adapted as you go on the scale-up journey. Spending time to identify appropriate existing structures to carry out the role of adopting and implementing the intervention at a larger scale and avoid creating parallel structures is critical.
- Reappraisal of the need and demand for the intervention at an early stage, including a review of programmes with perceived similarities, should be included in the scale-up journey.
- Alignment of the intervention to existing policies and interests needs to be considered at the outset. This requires not only in-depth knowledge of the policy environment, relationships with key decision-makers, but also continuous or frequent observation and scanning of the horizon for windows of opportunity and new and important stakeholders.
- Evidence is needed to convince stakeholders about scale-up. Major efforts are needed to generate and disseminate convincing evidence. However, it is not only evidence that plays a role in convincing stakeholders of the value of the MSI scale-up. It also depends on the mandate and position of the stakeholders and how they are viewed by others.
- Critical to this is the identification of champions and supportive stakeholders to advocate for further funded scale-up to ensure maximum impact and sustainability of the intervention.
- Thinking and working politically is essential to identify and anticipate changes in power relationships between key stakeholders and decision-makers that would support or hinder scale-up.

Conclusion

Using the structure of the Theory of Change has helped bring together multiple strands of the project, including the implementation and evaluation of the MSI and scale-up. The study confirms that the MSI is effective for developing management competencies and can lead to some improvements in workforce performance and service delivery, but we have learnt more about the MSI, and in particular the effect of multiple cycles. To have a bigger impact, the MSI needs to be implemented much more widely within the health system. While it was possible to achieve horizontal scale-up of the MSI with funded support through the PERFORM2Scale project, we learned the lessons that the journey to achieving longer-term sustainability is unpredictable and may result in substantially modified, but nonetheless contextually appropriate, interventions. The study findings underlined the importance of securing funding sources for whatever form the intervention takes, to ensure longer-term sustainability.

List of references

Aikins M, Akweongo P, Amon S & Agyemang S. *PERFORM2Scale Ghana Annual Scale-up Report 1* [GASUP1]. September 2018. [Unpublished report]

Aikins M, Akweongo P, Amon S, Agyemang S, et al. *PERFORM2Scale Ghana Annual Scale-up Report 3* [GASUP3]. September 2020. [Unpublished report]

Aikins M, Akweongo P, Amon S & Agyemang S. *PERFORM2Scale Ghana District Case Studies Annex* [GCA], July 2021. [Unpublished report]

Aikins M, Akweongo P, Amon S & Agyemang S. *PERFORM2Scale Ghana Outcome Narratives* [ONGH] September 2021 [Unpublished report]

Aikins M, Akweongo P, Amon S, Agyemang S, Gerold J, Wyss K, et al. *Ghana Country Report* [GCR]. November 2021. Available at: https://www.perform2scale.org/sites/perform/files/content/attachments/2021-12-07/Ghana%20Perform2Scale%20country%20report_Nov_2021%20-%20final.pdf

Aryaija-Karemani A, Mubiri P, Namukala J, Mansour W, Martineau T, Raven J et al. *Uganda Country Report* [UCR], November 2021. Available at: https://www.perform2scale.org/sites/perform/files/content/attachments/2021-12-07/Uganda%20Country%20report%20D3.1_Final%20report_30Nov21.pdf

Banda H, Chikaphupha K, Kwalamasa K & Sanudi L. *Inter-District Meeting Report, Malawi. Linde Hotel, Dowa.* [IDM Malawi]. June 2019 [Unpublished report]

Banda H, Chikaphupha K, Kwalamasa K, Sanudi L, Vallieres F, O'Byrne T, et al. *Malawi Annual Scale-up Report 3* [MASUP3]. September 2020. [Unpublished report]

Banda H, Chikaphupha K, Kwalamasa K & Sanudi L. *PERFORM2Scale Malawi Outcome Narratives* [ONMW]. August 2021. [Unpublished report]

Banda H, Chikaphupha K, Sanudi L, Kwalamasa K, Mona A, Vallières F, et al. *Malawi Country Report* [MCR]. November 2021. Available at: https://www.perform2scale.org/sites/perform/files/content/attachments/2021-12-07/Malawi%20Country%20Report%20Nov_30_2021%20Final.pdf

Banda H, Chikaphupha K, Kwalamasa K & Sanudi L. *PERFORM2Scale Malawi District Case Studies Annex* [MCA], December 2021. [Unpublished report]

Glaser EM, Abelson HH and Garrison KM (1983). *Putting knowledge to use: facilitating the diffusion of knowledge and the implementation of planned change*, Jossey-Bass San Francisco.

Kanmiki EW, Akazili J, Bawah AA, Phillips JF, Awoonor-Williams JK, Asuming PO et al. Cost of implementing a community-based primary health care strengthening program: The case of the Ghana Essential Health Interventions Program in northern Ghana. *PLoS ONE*, 2019; 14(2):e0211956. https://doi.org/10.1371/journal.pone.0211956

Kwesiga B, Wagner AK, Seru M, Ross-Degnan D & Trap B. Costs and effectiveness of the supervision, performance assessment and recognition (SPARS) strategy for medicines management in Uganda.

Journal of Pharmaceutical Policy and Practice, 2019; 12:36. https://doi.org/10.1186/s40545-019-0196-8

Martineau T, Raven J, Aikins M, Alonso-Garbayo A, Baine S, Huss R, Maluka S, Wyss K. Strengthening health district management competencies in Ghana, Tanzania and Uganda: lessons from using action research to improve health workforce performance. *BMJ Global Health*, 2018; 3:e000619. doi:10.1136/ bmjgh-2017-000619

Martineau T, Mansour W, Akweongo P, Banda HT, Mubiri P, Dieleman M & Raven J. *Designing appropriate strategies to improve workforce performance at district level in three African countries: what works?* [Poster] 6th Global Symposium on Health Systems Research, November 8-12, 2020. [Online] Available at: https://www.perform2scale.org/sites/perform/files/content/attachments/2020-11-12/Designing%20appropriate%20strategies%20to%20improve%20workforce%20performance%20at%20district%20level%20in%20three%20African%20countries_0.pdf

Mubiri P, Karemani A, Namakula J, Ssengooba F, Raven J, Mansour W and Martineau T. *PERFORM2Scale Uganda District Case Studies Annex* [UCA]. October 2021. [Unpublished report]

PERFORM2Scale Consortium. *Framework and Strategy for Scale-Up*, version 3. August 2017. [Unpublished paper]

PERFORM2Scale Consortium. *Toolkit for Scaling-up Management Strengthening Intervention*. April 2018. Available at: https://www.perform2scale.org/action-research-toolkit

PERFORM2Scale Consortium. *Theory of Change for scaling up management strengthening at district level to support the achievement of UHC.* May 2018. Available at: https://www.perform2scale.org/theory-of-change-for-scaling-up-management-strengthening-at-district-level-to-support-the

PERFORM2Scale Consortium. *Periodic Technical Report 1, Part B* [PR1], September 2018 [Unpublished report]

PERFORM2Scale Consortium. *Periodic Technical Report 3, Part B* [PR3], August 2021 [Unpublished report]

Republic of Uganda, Ministry of Health. *National Quality Improvement Framework & Strategic Plan* (2021-2025) Available at: http://library.health.go.ug/download/file/fid/3151

Ssengooba F, Namakula-M J, Mubiri P, Aryaija-Karemani A, Martineau T, Raven J & Mansour W. *Uganda Annual Scale-up Report 3* [UASUP3]. September 2020. [Unpublished report]

Ssengooba F, Namakula-M J, Mubiri P & Aryaija-Karemani. *Uganda decision space report*. June 2021. [Unpublished report]

Ssengooba F, Namakula-M J, Mubiri P & Aryaija-Karemani. A *PERFORM2Scale Uganda Outcome Narratives* [ONUG]. August 2021. [Unpublished report]

Waiswa P, Mpanga F, Bagenda D, Kananura RM, O'Connell T, Henriksson DK et al. Child health and the implementation of Community and District-management Empowerment for Scale-up (CODES) in Uganda: a randomised controlled trial. *BMJ Global Health*, 2021; 6:e006084, https://pubmed.ncbi.nlm.nih.gov/34103326/

World Health Organization /ExpandNet. *Nine steps for developing a scaling-up strategy*. Geneva, World Health Organization, 2010. Available at: https://www.who.int/immunization/hpv/deliver/nine_steps_for_developing_a_scalingup_strategy_who_2010.pdf

World Health Organization /ExpandNet. *Beginning with the end in mind: planning pilot projects and other programmatic research for successful scaling up*. Geneva, World Health Organization, 2010. Available at: http://www.expandnet.net/tools.htm

Annexes

Annex 1. Problems selected by district and country

Problem type key

SD: Service delivery problem PM: Performance management problem

Country	District Group	District	Cycle	Type of problem	Problem statement
Ghana	1	Fanteakwa	1	SD	Low OPD attendance
Ghana	1	Yilo	1	SD	Low case detection of neglected tropical disease (Yaws)
Ghana	1	Suhum	1	SD	Low ANC coverage
Ghana	1	Fanteakwa	2	SD	Low TB case detection
Ghana	1	Yilo	2	SD	Low NTDs case detection (Buruli ulcer and leprosy)
Ghana	1	Suhum	2	SD	Low ANC coverage
Ghana	2	Ayensuano	1	SD	Low ANC coverage
Ghana	2	East Akim	1	SD	Low ANC coverage
Ghana	2	Lower Manya Krobo	1	SD	Low Td2+ coverage
Ghana	3	Akwapim South	1	SD	Low TB case detection
Ghana	3	Nsawam-Adoagyiri	1	SD	Low TB case detection
Ghana	3	Atiwa East	1	SD	Yellow fever case detection
Ghana	3	Atiwa West	1	SD	Moderate anaemia in pregnancy
Malawi	1	Ntchisi	1	PM	90% of officers (grade K) did not develop workplans
Malawi	1	Dowa	1	PM	100% of health facilities were not supervised in 2017/18 leading to poor service delivery
Malawi	1	Salima	1	PM	More than 50% of health facilities were not supervised in 2017/18
Malawi	1	Ntchisi	2	PM	100% of departmental heads do not compile and submit descriptive reports
Malawi	1	Dowa	2	PM	80% of facilities in Dowa were not supervised in 2019/20
Malawi	1	Salima	2	PM	100% of health staff (grade K and above) were not appraised in the year 2018-19/2020
Malawi	2	Machinga	1	PM	Late data entry to DHS2
Malawi	2	Mangochi	1	PM	Lack of regular staff appraisals
Malawi	2	Zomba	1	PM	Poor leadership skills in health facilities
Malawi	3	Mzimba South	1	PM	62% of health facilities were not supervised in July - December 2020 in Mzimba South district
Malawi	3	Nkhata Bay	1	SD	100% of scheduled integrated outreach clinics along the hard-to-reach Thoto lakeshore areas were not conducted January- December 2020
Malawi	3	Rumphi	1	PM	72% of the health facilities were not supervised in quarter four of 2019/2020

Uganda	1	Nakaseke	1	PM	High level of absenteeism
Uganda	1	Wakiso	1	PM	High level of absenteeism among health workers
Uganda	1	Luwero	1	SD	Low TB cure rate
Uganda	1	Nakaseke	2	PM	High level of authorised and unauthorised absenteeism by health workers
Uganda	1	Wakiso	2	PM	High level of absenteeism among health workers
Uganda	1	Luwero	2	SD	Low TB cure rate
Uganda	1	Nakaseke	3	PM	80% of health workers at HC IVs had an incomplete performance management process
Uganda	1	Wakiso	3	PM	Performance appraisal assessment revealed 32.5% of health workers at HC-IV level had poor quality plans
Uganda	1	Luwero	3	PM	100% of health facility in-charges in public health facilities had deficient HR management skills
Uganda	2	Kabarole	1	SD	High number of fresh still births
Uganda	2	Bunyangabu	1	SD	Low level of ANC coverage
Uganda	2	Ntoroko	1	SD	Low attendance of ANC-1
Uganda	2	Kabarole	2	PM	70% of health workers did not have performance plans in 2019/2020.
Uganda	2	Bunyangabu	2	SD	High malaria positivity rate - 37% in July 2019 - June 2020 and 50% for July 2020 - against national target of 7% and district target of 11% leading to high morbidity and mortality
Uganda	2	Ntoroko	2	PM	61% of health workers were not appraised
Uganda	3	Luuka	1	PM	60% of staff were not appraised in the last financial year
Uganda	3	Jinja	1	SD	Local government registered low percentage (67%) of fully immunised children against the national target of 85%
Uganda	3	Buikwe	1	PM	Poor management system evidenced by 84% of appraisals being of poor-quality

Totals: Cycles completed: 43; Service delivery problems addressed: 21; Performance management problems addressed: 22