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## TECHNICAL REPORT

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# Improving the Performance of District Management Teams in the Lindi Region of Tanzania

**AUGUST 2016**

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This report on improving the performance of district health management teams in Tanzania was prepared by University Research Co., LLC (URC) for review by the United States Agency for International Development (USAID) and authored by Macdonald Kiwia and Allison A. Foster of URC. The work to strengthen district management performance in Tanzania was supported by the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) as part of its initiatives to improve performance management of human resources for health to improve HIV care quality. The report was prepared under the USAID Applying Science to Strengthen and Improve Systems (ASSIST) Project, which is made possible by the generous support of the American people through USAID.



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DISCLAIMER

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## Acronyms

5S	Sort, Systematic Arrangement, Shine, Standardize, Sustain
ART	Antiretroviral therapy
ASSIST	USAID Applying Science to Strengthen and Improve Systems Project
CCHP	Comprehensive Council Health Plans
CHAI	Clinton Health Access Initiative
CHMT	Council Health Management Team
DHIS	District Health Information System
EGPAF	Elizabeth Glaser Pediatric AIDS Foundation
HCI	USAID Health Care Improvement Project
HRH	Human resources for health
FIFO	First-in, first-out
M&E	Monitoring and evaluation
MOHSW	Ministry of Health and Social Welfare
OPRAS	Open Performance Review and Appraisal System
PEPFAR	U.S. President’s Emergency Plan for AIDS Relief
PMTCT	Prevention of mother-to-child transmission of HIV
QI	Quality improvement
RHMT	Regional Health Management Team
R&R	Requesting and reporting
URC	University Research Co., LLC
USAID	United States Agency for International Department

## **FOREWORD**

In 2012, we welcomed USAID support to work in collaboration with the Ministry of Health and Social Welfare, the Lindi Regional Health Management Team and all six Council Health Management Teams (CHMTs) in Lindi to explore options for improving management performance at the CHMT level. The overall objective was to apply quality improvement methods to develop and prototype changes that would strengthen the management capacity of CHMTs to support improved quality of care in the Lindi Region.

Both Lindi and our neighbor Mtwara Region face staff shortages. The remoteness of these regions contributes a lot to these shortages. Some of the few new staff who are allocated to these regions never report, and some who manage to report to their working station do not last long before they quit.

CHMTs often delayed submission of their reports; requests for drugs were also delayed and were often submitted with errors. We have seen changes since the start of this intervention to improve CHMT performance. The indicators show good progress, which we believe has also resulted in better clinical outcomes. CHMTs have been equipped with knowledge on quality improvement which I believe will be very useful when we roll out quality improvement efforts to cover more health facilities.

On behalf of the regional team and CHMTs, I thank USAID for their ample support of the CHMT improvement intervention in Lindi. We hope our experience will be useful to others who want to improve regional and district management team performance for better health services.

**Dr. Sonda Shaaban**  
***Regional Medical Officer, Lindi, Tanzania***



## EXECUTIVE SUMMARY

Beginning in 2008, the USAID Health Care Improvement Project (HCI) supported the Ministry of Health and Social Welfare and implementing partners in Tanzania to apply modern quality improvement methods to build the capacity of regional and council health management teams and providers to deliver high-quality HIV services in several mainland regions, including the Lindi Region in southern Tanzania.

In 2012, with funding support from the U.S. President's Emergency Plan for AIDS Relief, HCI began a district health management performance improvement intervention in the Lindi Region with the aim of building the capacity of the region's six Council Health Management Teams (CHMTs) to more effectively manage and support health care quality improvement (QI) in the 207 health facilities they supervised across their catchment areas,

An initial investigation was conducted to assess the CHMT teams' level of understanding and use of quality improvement principles and practices. A self-reported assessment tool showed that the CHMTs had very limited understanding of QI. Consequently, the HCI team determined that the first step to empowering the CHMTs to spread QI to their facilities was to build the QI capacity of the CHMTs themselves. The intervention was premised on the idea that if CHMTs had stronger capacity for quality improvement and used the practice to improve their own performance in district management functions, they would then be able to more effectively spread improvement practices throughout their districts, particularly for HIV services. In 2013, support for the district health management intervention transitioned to the USAID Applying Science to Strengthen and Improve Systems (ASSIST) Project, the follow-on project to HCI.

The intervention in Lindi was designed to improve the district managers' ability to use QI interventions to strengthen their performance in five management functions: 1) health services quality improvement, 2) supply management, 3) district management and planning, 4) information management, and 5) human resources management. The activity was also intended to identify best practices for fostering QI across district facilities.

HCI staff trained the six CHMTs and the Regional Health Management Team (RHMT) in how to use improvement methods to: 1) identify gaps and define changes in processes or practices that might address those gaps; 2) test those changes and document their impact; 3) study the impact to determine if it was actually an improvement in performance; and 4) then apply what was learned going forward. The RHMT, the CHMTs, and HCI staff jointly developed a set of 10 indicators that the CHMTs used to track their progress in improving their performance of management functions.

After the initial orientation to the practices and principles of improvement, the CHMTs agreed to meet at least once a month to review their management improvement work, assess as a group the changes they were implementing, confirm the roles and responsibilities of each CHMT member in implementing the changes, study the results, and plan the next actions. They collected data on the 10 indicators to track improvements in performance in the five management functions. To support their initial work, a project advisor joined the CHMT members during their monthly meetings and helped them to begin instituting changes and documenting progress in their performance as management teams. In addition, the six CHMT teams came together as a group in three learning sessions convened over the course of the 18-month intervention to share experiences.

Once the CHMTs demonstrated their understanding of QI, ASSIST advisors asked them to choose two facilities under their supervision to introduce QI at the facility level. ASSIST advisors support the CHMTs to conduct a two-day training for the 12 facility teams to introduce the QI approach to identify service gaps and interventions to bridge them and improve service performance. With their facility teams, the CHMTs selected priority HIV services around which the facility teams would apply their learning and begin practicing QI themselves, supported by CHMTs during monthly visits.

Over the course of 18 months of improvement work (from March 2012-September 2013), the six CHMTs made gains in most of the 10 performance indicators. For example. :

- In March 2012, none of the participating CHMT members felt they possessed even a low level of competency in basic improvement tasks. By September 2013, 75% of CHMT members felt they were competent and confident to perform and lead all the basic improvement tasks.
- Processing of supply orders by the CHMT within two weeks of receipt of order increased from 85% at baseline to 97% in September 2013.
- Timely submission of required reports by the district improved from 78% at baseline to 91% by September 2013.
- The proportion of new staff who received a timely orientation increased from 53% at baseline to 69% by the last measurement in 2013.
- Retention of new staff at six months remained high despite a large increase in the number of new staff reporting. At the same time that the number of vacancies submitted to the regional level increased; the proportion of these that were submitted within deadlines remained steady at 68%.
- The proportion of staff at the District Hospital who received an annual performance appraisal rose from 5% at the time of the intervention's start to 55% by September 2013.

While it was expected that using improvement approaches to raise the level of performance of the district management teams would lead to expansion of QI practices throughout the facilities in their districts, the intervention did not significantly increase the proportion of supervised facilities engaged in QI activities. External factors constrained the spread of quality improvement. For example, even though the CHMT members developed coaching and quality monitoring skills, lack of time and vehicles for transportation and lack for resources to purchase fuel thwarted efforts to make the necessary visits to lead QI at facility level, particularly important in establishing and standardizing QI practices that can then continue without the same close monitoring.

Improvements in CHMTs' management performance did, however, strengthen critical "above-site" management functions that underpin quality care at the facility level. The quality improvement intervention with the six CHMTs in the Lindi Region and their experience in adapting and applying QI principles resulted in the identification of successful practices and the development of tools that can be used in other districts in Tanzania and elsewhere. Despite many challenges to quality service delivery over which they have no control, such as delays in commodity delivery or resource shortages, the CHMTs found that they could improve their management performance in several arenas. Moreover, they discovered that improved management performance contributed to improved quality of services.

It is also worth noting those management areas that did not improve through this 18-month intervention. Areas that were not substantially improved include: 1) Providing supportive supervision and mentoring to facility staff; 2) facility-level QI activities; and 3) monitoring and using data reported for decision-making. At the same time, the Lindi intervention did illustrate what kind of district-level management improvements are possible, even in a highly resource-constrained setting.

In April 2014, the USAID ASSIST Project convened a harvest meeting to bring together representatives from the region, the six CHMTs, and twelve facilities to reflect on key areas of learning and make recommendations on ways to strengthen linkages between the district management team and the facilities. Future interventions to improve district health management should more directly address facility-level quality improvement, ideally linking support for district management improvement with efforts to engage facility-level staff in clinical quality improvement work to address national program priorities. Building district managers' capacity to coach quality improvement activities is necessary but insufficient to stimulate service improvements at the facility level without additional interventions and resources.

## I. BACKGROUND

### A. Interest in Improving Performance of District Management Teams

The health system of Tanzania is highly burdened by HIV and AIDS. With an estimated adult prevalence of HIV of 5.3%, Tanzania has an estimated 1.6 million people living with HIV. Each year, some 100,000 more Tanzanians become infected with HIV, and an estimated 86,000 die annually as a consequence of HIV infection.

The southern coastal regions of Mtwara and Lindi are remote and historically under-developed areas of the nation. Lack of access to quality care thwarts prevention measures to stop the spread of HIV and constrain the impact of services delivered in these two regions. Because more efforts had been directed at other parts of the country, in late 2009, the USAID Health Care Improvement (HCI) Project partnered with the Tanzania Ministry of Health and Social Welfare (MOHSW) and other national and regional implementing partners to build capacity in the Mtwara and Lindi regions to improve the quality HIV services to achieve better health outcomes. HCI's work in Tanzania was supported by the U.S. President's Emergency Plan for AIDS Relief (PEPFAR).

In Mtwara, HCI began support for an improvement collaborative focused on achieving better quality antiretroviral therapy (ART) and prevention of mother-to-child transmission (PMTCT) services involving nine care and treatment centers in September of 2009. In Lindi, HCI provided technical support to the Regional Health Management Team (RHMT), the Clinton Health Access Initiative (CHAI), and the Elizabeth Glaser Pediatric AIDS Foundation (EGPAF) to launch an ART/PMTCT improvement collaborative in November 2009, involving 10 health facilities across the region.

One problem area identified as key to improving the quality of HIV care in Tanzania is the management of human resources. In collaboration with the MOHSW, in July 2010, HCI conducted a baseline assessment of HIV service providers in Mtwara to gather information on health worker productivity and engagement.<sup>1</sup> The baseline assessment highlighted some specific areas of human resources management which could be improved at the facility level, including clarifying roles and responsibilities through written job descriptions that clearly align health worker tasks and program goals, developing clear processes for feedback and performance evaluation, and increasing the productivity of health workers providing HIV services.

To improve the efficiency of service delivery and strengthen health worker performance and engagement, the MOHSW and HCI decided to integrate human resources interventions into the improvement work in Mtwara and initiate a second, more focused improvement collaborative in Tandahimba District, one of six districts in the region. The collaborative to improve the performance management of human resources providing HIV care was supported by PEPFAR through USAID, which was interested in applying the approach that had been piloted by HCI in Niger in a high HIV prevalence setting like Tanzania.

The goal of the Tandahimba human resources improvement collaborative was to improve the effectiveness and efficiency of HIV service delivery and to strengthen health worker performance and engagement. Implemented from July 2010 through August 2012, it involved 12 of the 35 health facilities in Tandahimba District, including the Tandahimba District Hospital, which had participated in the prior ART/PMTCT improvement work in Mtwara that began in 2009. The other 11 facilities in Tandahimba had no prior improvement experience.

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<sup>1</sup> See Wittcoff et al. 2011. Baseline Assessment of HIV Service Provider Productivity and Efficiency in Tanzania. Technical Report. Published by the USAID Health Care Improvement Project. Bethesda, MD: University Research Co., LLC (URC). Available at: <https://www.usaidassist.org/resources/baseline-assessment-hiv-service-provider-productivity-and-efficiency-tanzania>.

With orientation and coaching support from HCI, the 12 facility teams in Tandahimba tested small changes to streamline processes, raise the standards of clinical practice, and increase the engagement of health workers. The intervention achieved good results in terms of improvements in some measures of quality of HIV care as well as in relationships and teamwork between health workers, although no gains were achieved in terms of health worker productivity.<sup>2</sup> The results demonstrated the effectiveness of the improvement approach as applied to human resources management and suggested that using this approach at the management level could be effective to maximize existing resources to deliver quality care.

Based on the work in the Tandahimba District, HCI proposed to the MOHSW a larger improvement intervention to strengthen district-level management teams, known in Tanzania as Council Health Management Teams (CHMTs), so that they would be able to perform their management functions more effectively and spread improvement practices throughout their districts. The MOHSW proposed that the intervention be implemented in the neighboring region, Lindi, where the RHMT was also on board with the idea of focusing on improving district-level management.

District management systems are of particular focus for HIV programs because of their above-site role in enabling and supporting the facilities in their catchment area and the health workers in those facilities to undertake continuous improvement of HIV services. The institutionalization of quality management systems at district and regional levels has been an area of weakness in countries that are applying quality improvement (QI) interventions. This weakness often leads to QI that is contained or isolated within supported sites. By improving management performance at the district level, this activity was intended to provide stronger and more consistent support for facility-level QI. The intervention was also expected to yield best practices, methods, and tools for more effective and efficient management practices to support high-quality HIV service delivery at the facility level.

## B. Background on the Lindi Region

The Lindi Region is divided into six district councils, encompassing 207 facilities (district hospitals, health centers, and dispensaries), as shown in **Table 1**. Those district councils are: Kilwa (51 facilities), Lindi District (44 facilities), Lindi Municipal (17 facilities), Nachingwea (35 facilities), Ruangwa (25 facilities), and Liwale (35 facilities).

**Table 1. Summary of background characteristics by district**

Districts	Liwale	Lindi Municipal	Lindi District council	Kilwa	Nachingwea	Ruangwa	Lindi Region
Population	90,777	111,325	206,378	186,503	195,755	152,281	906,256
Rural population	68,557 (76%)	0	N/A	90%	51,693 (26%)	N/A	74%
Number of females	45,945 (50%)	58,984 (53%)	107,971 (52%)	95,389 (51%)	99,979 (51%)	78,708 (52%)	493,774 (54%)
Women of child bearing age (15-49)	44,388 (97%)	27,485 (47%)	66,403 (62%)	43,604 (46%)	48,530 (49%)	39,634 (50%)	243,090 (49%)

<sup>2</sup> See Maggige et al. 2013. Improving quality of HIV services and health worker performance in Tandahimba District, Tanzania: An evaluation. *Research and Evaluation Report*. Published by the USAID Health Care Improvement Project. Bethesda, MD: University Research Co., LLC (URC). Available at: <https://www.usaidassist.org/resources/improving-quality-hiv-services-and-health-worker-performance-tandahimba-district-tanzania>.

Districts	Liwale	Lindi Municipal	Lindi District council	Kilwa	Nachingwea	Ruagwa	Lindi Region
Number of infants	3,368 (4% pop)	2,785 (3%)	3,527 (2%)	6,081 (3%)	5,342 (3%)	4,494 (3%)	27,849 (3%)
Number of children <5 years	14,939 (16% pop)	12,615 (11%)	33,449 (16%)	30,558 (16%)	26,028 (13%)	20,205 (13%)	130,594 (14%)
HIV prevalence (%)	2.5	4% VCT 6% PMTCT	5%	2.3%	3.8%	3.8%	3.8%
District fertility	12.6%	20%	1.96%	23.6%	6.5%	4%	5.7%
Health facilities	35	17	44	51	35	25	207

In 2012, HCI, Lindi's RHMT and its six CHMTs agreed to work with HCI to test out an intervention to improve management performance to see if the six management teams could raise the quality of HIV care delivered in their districts by first improving their own performance and then by spreading quality improvement practices to the all facilities in their respective districts. Several of the facilities in Lindi, including the district hospitals, had been exposed to quality improvement principles through their work with the German Agency for International Cooperation and through working on an ART/PMTCT improvement collaborative supported by with CHAI and EGPAF with coaching from HCI.

### **C. Objectives of the District Health Management Improvement Intervention**

The overall objective of the Lindi improvement activity was to support district management teams to improve their performance in management functions using quality improvement, so that they would be able to institute and support quality improvement practices in the facilities throughout their catchment areas and thus improve service quality and health outcomes for HIV patients in the Lindi Region.

Weaknesses were identified by CHMTs in Lindi in five management functions: 1) QI, 2) supply management, 3) district management and planning, 4) information management, and 5) human resources management. These areas were identified by the RHMT and CHMTs as the functions of district health management that directly affect the quality of health services provided at the facility level. The activity as a whole was also intended as a learning opportunity through which the Ministry of Health and partners would learn what approaches do or do not facilitate the spread of QI to catchment facilities, providing guidance for scaling up management improvements across other regions in Tanzania.

This report describes how management teams in Lindi were able to improve their own performance in carrying out key management functions. It offers guidance for other districts in Tanzania and beyond for improving district management performance so management teams might better support their facilities to deliver quality care.

## **II. IMPROVEMENT INTERVENTION FOR DISTRICT HEALTH MANAGEMENT**

### **A. Rapid Situational Analysis**

The intervention started with a rapid situational analysis conducted in February 2012, based on group interviews with each CHMT and the RHMT. The interviews were used to identify key issues that the teams could address using an improvement approach as well as to explore potential changes that could strengthen the performance of CHMTs. Key findings of the analysis are summarized below by management function.

## 1. Quality improvement

With respect to the management function of supporting QI, the situational analysis examined: 1) The presence and activeness of roles and mechanisms within the CHMT to support QI, 2) the extent to which QI processes were institutionalized at the district and facility levels, and 3) communication of information and the use of data for improvement.

All CHMTs and the RHMT had a designated QI coordinator. Four out of the six CHMTs indicated that they had a district-level QI team; however, two of the four were said to be inactive.

All CHMTs indicated that they had some district mechanisms in place to support improvement at facilities, including coaching facility QI teams, training staff on QI, providing supportive supervision, and supporting learning sessions. CHMT members remarked that QI was mainly focused on HIV in the health facilities supported by PEPFAR implementing partners and had not spread beyond these areas or facilities. Four of the CHMTs indicated that they had set goals and targets for QI, and it was observed that these mainly applied to HIV services. None of the CHMTs had defined system-wide improvement priorities across the district, and only one CHMT stated that it had structures and processes in place to achieve improvement targets.

Five of the CHMTs stated that they did not have a system for ongoing communication with key stakeholders on improvement, nor had they developed and implemented strategies to sustain the improvement agenda. Half of the CHMTs did not feel that they collected sufficiently accurate data for decision-making.

**Opportunities for improvement in QI:** Given the responsibility of CHMTs to establish and manage systems to support improvements in care in health facilities, CHMTs must have QI competencies and actively coordinate the implementation of QI at the CHMT level and support all their facilities to measure and improve quality of care. Despite expectations that the CHMTs were using QI, the assessment revealed that they had been exposed but their understanding and application of QI principles and practices was very low or non-existent.

## 2. Supply management

In the supply management function, the CHMT assessment identified challenges related to 1) the quantification, forecasting, and ordering of drugs and reagents, 2) the disposal of expired drugs, and 3) the management of stock imbalances between facilities.

CHMT staff expressed that much of the problem lies with weak capacity at lower level facilities, which fail to accurately predict their needs when ordering or do not completely fill out ordering forms. This weak capacity is exacerbated by the lack of supervision at the facility level by pharmaceutical personnel, either due to limited transportation availability or in the case of some districts, such as Nachingwea, lack of district pharmaceutical personnel.

The destruction of expired/unusable stock was also reported as a problem by all districts. The districts do not have a mandate to destroy expired drugs. Instead, the process is centralized, and expired drugs must be picked up by a centrally authorized agent. As a result, facilities have piles of expired stocks waiting to be picked up for destruction.

Redistribution of stocks between facilities involves moving excessive drugs that are not needed from one facility to other facilities with shortages of those drugs. Districts noted that village authorities who have oversight over the local facilities may refuse the redistribution of drugs to other facilities.

**Opportunities for improvement in supply management:** In order to achieve efficient systems for ordering and quantification, facility-level staff need to be trained in forecasting, ordering, and inventory management, especially for antiretroviral drugs. Storage practices need to reinforce first-in/first-out (FIFO) supply management to ensure that older supplies are used first. This can be done through

coaching and mentoring by district supervisors and pharmacy staff, through the proper use of ledgers to minimize the risk of accumulating drugs that are close to expiry, and putting in place processes by which facilities report when they have drugs which are about to expire. Districts recommended that the process of destruction of expired drugs be decentralized to the regional level, presuming that if regions are given the power to destroy these drugs, the process will be faster than it is now.

### **3. District management and planning**

The assessment of the district management and planning function focused on three issues: 1) Delays in disbursement of funds and discrepancies between funds requested and funds received, 2) challenges in coordinating donor inputs, and 3) weak execution of plans.

The MOHSW provides financing and policy guidelines which councils use to develop their Comprehensive Council Health Plans (CCHPs). The MOHSW scrutinizes these plans, must approve them before disbursing funding, and evaluates their implementation. A key challenge reported by the CHMTs was that the disbursement of funds for the plans was normally delayed, resulting in delays in implementation. Moreover, the amount eventually disbursed was often less than the required amount requested by the district.

Districts manage donor-supported activities by integrating them into the CCHP. The CHMTs reported involving stakeholders in various ways during the planning process. Some stakeholders provide activities/ideas which need to be included in the CCHP and inject funds directly, while others do not contribute funds directly to the district but rather provide in-kind support. It was also observed that CCHPs in most of Lindi's districts depend heavily on donor funds for implementation. CHMTs do not have mechanisms in place to implement activities in case donor funds get delayed.

CHMT members reported that the coordination of CCHP implementation is also a problem in most of the districts. Planned activities are often delayed by ad hoc activities and sometimes get postponed to the next fiscal year. CHMTs do not have a good system for coordinating the implementation of the CCHP or periodically reviewing progress in plan execution to evaluate performance.

***Opportunities for improvement in district management and planning:*** There is a need to assess how the delayed fund disbursement could be addressed. Monitoring the implementation of plans also needs to be improved, including timely re-programming of activities when there is a need to do so.

### **4. Information management**

In the information management function, the situational assessment focused on: 1) Challenges in data entry and management, 2) delayed submission of reports from lower levels, and 3) lack of a functional process for managing and analyzing data.

During the assessment, it was reported that districts face technical challenges in using the District Health Information System (DHIS). Most of the data entry is done by program coordinators, as some districts have no data clerks. Since these program coordinators have other responsibilities, data entry is often delayed. It was also noted that few staff have the skills to enter and analyze data in the DHIS. Additionally, CHMT members complained of challenges, such as power shortages, backload of data waiting to be entered into the DHIS, and computer availability.

Facilities are supposed to submit their reports to their CHMT 5-7 days after the end of the month. CHMTs submit their reports to the RHMT 14-15 days after the end of the month. The RHMT should submit its regional report to the national level 21 days after the end of month. Delayed report submission from lower-level facilities was highlighted as a key driver of delays in reporting by the CHMTs to the region. CHMT members attributed these delays to: Ad hoc activities which limit health workers from working on the reports, limited English proficiency, new staff who have not been trained on the kinds of reports needed or the reporting tools to use, and impassability of roads during the rainy season. They also noted

a tendency by some health workers to delay submission of reports to the district level until the end of the month, when they can deliver the reports and collect their salaries at the same time.

The data analysis process was also problematic. In most districts, the data are reviewed by the information system focal person, supported by program coordinators. The same people enter the data into the computer and validate and analyze the data, together with the district monitoring and evaluation (M&E) group. Every district has an M&E group that is responsible for data analysis, interpretation, and sharing findings with the RHMT, other members of the CHMT, and lower-level facilities. The group is supposed to meet once every quarter. CHMT members interviewed said that because M&E is not seen as a joint responsibility, in four out of the six CHMTs, the M&E groups do not meet regularly as planned. In these districts, M&E processes are dependent on the information system focal person alone to carry the load.

**Opportunities for improvement in information management:** CHMTs recognized the priority area to improve is the M&E function at the district level. CHMT M&E groups need to meet regularly and support the information system focal persons. The CHMT M&E groups should regularly monitor and provide feedback to facilities on their performance.

## 5. Human resources management

Key human resource issues discussed in the interviews included: 1) Shortages in number of staff available for each cadre, 2) retention of new staff, 4) training, 5) supervision, 6) performance feedback, and 7) performance appraisal.

All six districts face an acute shortage of health workers, which ultimately affects the delivery of health services. Several issues were cited as reasons for the shortage of staff, including remoteness of the districts, delayed salaries and other statutory benefits, poor working environment, lack of adequate housing, and cumbersome recruitment procedures. CHMT staff interviewed noted that the centralized recruitment by the Public Service Management takes 6-12 months and sometimes results in posting staff who are not interested in working in that particular district or do not have the skill set matching the open position.

Five districts out of six reported holding orientations for new staff, but they also acknowledged that the orientation mechanisms did not adequately prepare new staff or position them for high performance and retention. Orientations included verbal description of job tasks and responsibilities, physical orientation of facilities, staff meetings at the departmental level, and pairing newly recruited staff with experienced staff for mentoring. However, those CHMT members interviewed said there was not an explicit, standardized orientation process used consistently for all new hires. When recruited, new staff starts working at the district hospital for a period of time before being posted to the facilities. New staff often arrive at facilities without prior notification, so there are no preparations to welcome them, no housing, and no amenities. Further, processing delays of new staff to payroll delays their initial income, so newly deployed health workers are often stranded without funds to purchase even basic necessities. Finally, even though the new hires have been deployed to some of the most remote communities in Tanzania, none of the Lindi districts offers any hardship packages for rural health workers. These difficulties were some of the reasons cited to explain why new staff would leave their new positions in Lindi within the first six months.

Two districts, Nachingwea and Liwale, had implemented specific retention strategies. Liwale provided subsistence allowance for 14 days to newly recruited staff and installed solar energy to staff houses and health facilities. Nachingwea built five houses for staff and rehabilitated 11 others, and 35% of all staff houses are installed with solar power. Five districts reported to have incentive packages for staff living with HIV but these were only partially implemented due to shortage of funds.

The availability of formal training opportunities in most of the districts depends entirely on the CCHP budget assigned by the MOHSW. In general, the CHMT advertises available training posts for staff to

apply to, and then the CHMT selects training participants according to available posts. Beyond the limited availability of formal training posts, districts have used mentoring to develop staff capacity.

All districts are required to conduct supportive supervision to health facilities. Each facility is supposed to be visited at least once per quarter (four visits in a year), but typically only two visits are made per year. Tools used for supportive supervision include: checklists, report forms, and guidelines. Most Lindi districts use vehicles and motorcycles, although some districts use boats as transportation to health facilities. Supervision challenges faced by CHMTs include difficulties in reaching some areas, especially during the rainy season; ad hoc activities interfering with supportive supervision plans; staff shortages, making it difficult for the health workers at the facility to commit time for supervision; shortage of vehicles and other logistical support; and late disbursement of funds, which delays the implementation of the annual plans. However, some districts have managed to conduct the supervisions prior to disbursement and get paid their allowances later when funding becomes available.

After facility visits, CHMTs provide feedback through reports, which are prepared by the CHMT and submitted to the facilities. These reports are not standardized. Feedback is also given during quarterly or semi-annual meetings between a CHMT officer and the in-charge of facilities. Sometimes letters are written and sent to the health facilities noting problems observed. However, CHMT members interviewed admitted that there is no consistent way of giving feedback to the health facilities.

Health care workers in Tanzania get promoted based on performance assessments conducted through the Open Performance Review and Appraisal System (OPRAS). Staff are eligible for promotion after every three years of service depending on their performance, academic qualifications (staff who have no secondary education are not entitled to promotion), and the availability of funds to pay for the salary increase. Although all staff are required to fill out OPRAS forms, interviewed CHMT members maintained that facility in-charges are not yet trained on filling out OPRAS forms and are not using them. Without complying with the OPRAS system, staff cannot be promoted.

***Opportunities for improvement in human resources management:*** Given chronic staff shortages, one opportunity for finding suitable staff is to connect with local training institutions to identify graduates who are interested in working in the district. Decentralizing recruitment procedures to the regional level could allow the region to give priority to job applicants who are local graduates and who may be more likely to stay in positions in the district. A comprehensive orientation package for new staff should be shared among all councils in Lindi so that good practices can be applied consistently throughout the region. Similarly, effective retention strategies should be identified and applied consistently across all councils. CHMTs should develop consistent procedures for supervising facilities and providing feedback and should actively support the implementation of the OPRAS system.

## **B. Supporting CHMTs to Prioritize Gaps and Address Areas for Improvement**

HCI advisors first asked the Lindi RHMT and the six councils to form QI teams, building on existing QI teams and focal person roles. Each team was invited to send representatives to the first learning session of the district health management improvement intervention, held in March 2012. Using the baseline situational assessment to inform their improvement aims, these teams were asked to identify gaps in their management performance and select priority areas for improvement.

At the beginning of the learning session, participants took a self-assessment of their ability to carry out QI. The self-assessment focused on how well they understood seven basic improvement tasks and related competencies and how confident they felt in practicing these competencies. (The self-assessment instrument used is found in **Appendix 1**.) All participants scored themselves as zero in all competency areas, despite their previous exposure to QI.

To establish a baseline for improvement practices of the RHMT and the CHMTs, teams were also asked to complete a self-assessment of their current quality management and improvement practices. The findings, shown in **Table 2**, highlight the fact that all six councils had some QI structures and processes in

place but that some councils were doing much more than others. These differences also pointed to weakness in QI coordination at the regional level.

**Table 2. Self-assessment of elements of quality management by the CHMTs, March 2012**

	Elements of Quality Management System	RHMT	Liwale	Lindi Municipal	Lindi District Council	Kilwa	Nachingwea	Ruagwa
1	We have in place a system of knowing our clients' needs and expectations	Yes	Yes	Yes	Yes	No	No	Yes
2	We regularly measure our clients satisfaction and act on the results	No	No	Yes	Yes	No	No	Yes
3	We have established clear goals and targets for QI	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	We have support with resource and training and ensure accountability for QI	Yes	No	Yes	Yes	Yes	No	Yes
5	We have identified system wide QI priorities and Key Result Areas	Yes	No	Yes	Yes	Yes	Yes	Yes
6	We have assigned responsibility to achieve QI results (focal persons)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
7	We have developed integrated structures and arrangements to achieve QI targets	Yes	Yes	Yes	No	Yes	Yes	Yes
8	All stakeholders understand and own the QI agenda in the district	No	No	No	No	Yes	Yes	Yes
9	We have organized regular QI sharing and learning sessions	No	No	Yes	No	No	No	Yes
10	We have standardized methods and tools for QI	No	No	Yes	No	No	No	Yes
11	We collect sufficiently accurate data for decision making	No	No	Yes	Yes	Yes	Yes	Yes
12	We have a system of constant dialogue and communication with QI stakeholders	No	No	Yes	No	No	Yes	Yes
13	We have developed and implemented strategies to sustain the QI agenda	No	No	Yes	No	No	No	Yes

During the learning session, teams were oriented to QI and how to follow the plan-do-study-act cycle as a way to plan changes in processes or practices that might improve performance; test those changes, documenting the impact that the changes were making; study the impact and determine if the impact is actually an improvement in performance; and then apply what is learned to either continue the adapted practice or to make a different change.

Also during the learning session, the RHMT, CHMTs, and HCI staff jointly developed a set of 10 indicators for the CHMTs to use to track their progress on improving management functions, shown in **Table 3**. The management teams discussed at length how often the indicators should be measured. Some indicators, such as those that monitored the timely submission of reports, could be measured only quarterly because reports were only submitted every three months. Other indicators, such as supervision, needed to be measured monthly because the activity was supposed to happen each month. It was agreed that data for these indicators would be documented by each CHMT and reported to the RHMT.

The RHMT agreed to collate data from all the districts in an Excel database and report these data to HCI (and later ASSIST, when the activity transitioned to the follow-on project).

After the initial orientation to QI practices and principles, the CHMTs agreed to meet at least once a month to review their management improvement work, assess as a group the changes they were implementing, confirm the roles and responsibilities of each CHMT member in implementing the changes, study the results, and plan the next actions. To support their improvement efforts and documentation, a project advisor met with the CHMT members during their monthly meetings.

**Table 3. Indicators developed and tracked by the CHMTs to show improvement in management functions**

Management function	Performance improvement goal	Indicators tracked by CHMTs
Quality improvement	Improve district-led support and coordination of quality improvement practices in health facilities	1. % of management team members with basic set of improvement competencies 2. % of health facilities applying improvement approaches to improve health services
Supply management	Improve timely receipt and processing of supply orders	3. % of facilities that submitted supply orders on time to district 4. % of supply orders which were processed per standard
District management and planning	Improve planning and management of district teams	5. % of management team members with clear and rationalized job descriptions
Information management	Improve accuracy, timeliness, and accessibility of district health information	6. % of district level reports submitted to the regional level on time
Human resources management	Improve human resources management (orientation, new staff retention, follow-up on vacant posts, performance appraisals)	7. % of newly recruited staff that received a technical orientation within two weeks of reporting 8. % of newly recruited staff that are retained at six months 9. % of vacant posts that were followed up and submitted to the regional level within deadlines 10. % of staff at the District Hospital that have undergone an annual performance appraisal

Using these indicators, the district teams began to look at each management function gap to determine what changes they could make to close those gaps. CHMTs were encouraged to begin by exploring the goals, roles, and responsibilities of their own team and of the individuals within their teams. Within those responsibilities, the CHMTs then defined how they should be performing in their management functions, according to the expectations of the RHMT and in line with their own experience.

To make changes in practice and processes, it was important that the CHMTs define among themselves which team member should be responsible for what tasks in the improvement process. As with the initial identification of the roles and responsibilities of the team as a whole, it was important that the roles and responsibilities of each team member were clear not only to themselves but to all members of the CHMT. This clarity allowed for better accountability within the team and helped to build the team's confidence in its ability to plan, manage, and make improvements.

At the subsequent on-site monthly coaching visits from the ASSIST advisor and learning sessions, CHMTs were given technical assistance to develop action plans to test changes to improve critical processes for those priority functions. They were introduced to the QI team documentation journal to record improvement objectives, changes that were tested, and track progress. Teams were supported to develop basic competencies in improvement and to apply improvement approaches to management functions that directly impact the performance of health facilities in providing quality health services.

After the second learning session in June 2012, project technical advisors met with council and regional management teams at least quarterly to provide coaching support and to gather feedback on the progress, learning, and challenges that the teams were facing in pursuing their improvement objectives.

Management teams came together for a third learning session in June 2013 to share progress and experiences. At that learning session, representatives from the 12 facilities also participated so that management teams could practice orienting and coaching facility representatives on how to form their own facility-level improvement teams. Following the learning session, CHMT representatives established the practice of meeting each week to identify gaps and review change ideas, document changes, and track progress, beginning with a baseline. CHMT supervisors and facility teams both reported in interviews this type of collaborative work created a mentorship relationship between the supervisors and the facility staff, improved their working relationship, and improved their understanding of their roles and responsibilities in initiating QI activities.

### **III. RESULTS**

#### **A. Improvements Achieved by Management Function**

Over the course of 18 months of improvement work (from March 2012-September 2013), the six CHMTs made gains in most of the 10 performance indicators listed in **Table 3**. The greatest gains were made in the areas of building QI competencies among CHMT members, creating job descriptions for CHMT members, submitting supply orders and administrative reports on time, undertaking hospital staff performance appraisals, and providing timely technical orientation for new staff. Progress on each indicator is presented in the form of a time series chart and discussed below, grouped by management function. Time series charts with at least 10 data points also include median lines.

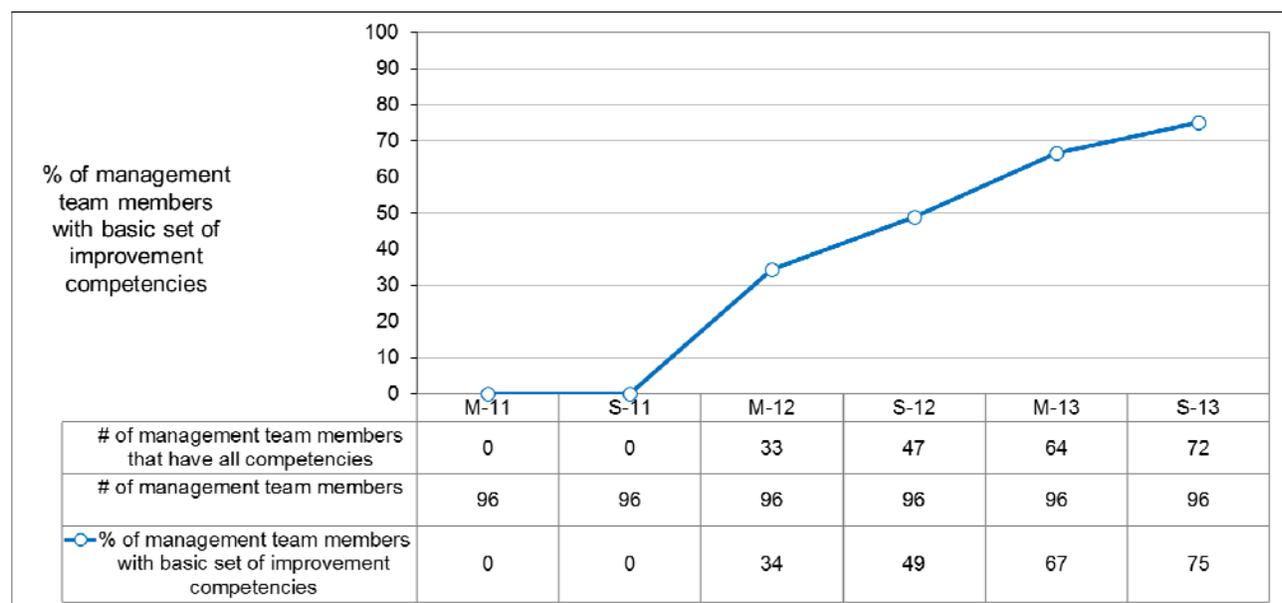
##### **1. Quality improvement**

The quality improvement function encompassed both the management teams' knowledge and application of QI principles and practices and their support of facility-level improvement activities. Two indicators were chosen to track progress in implementing QI.

The first indicator tracked was the percentage of district management team members with basic improvement competencies. When CHMT members were asked in March 2012 to self-assess their individual capacity to carry out basic improvement tasks (see tool in **Appendix 1**), none of the CHMT members felt they possessed even a low level of competency in all improvement tasks. As shown in **Figure 1**, by September 2013, 75% of CHMT members felt they were competent to perform all basic improvement tasks. This increase in confidence correlates with the project's training and coaching. Project coaches provided particular support in helping the CHMTs to feel comfortable and develop skills and confidence in the areas where they had scored low.

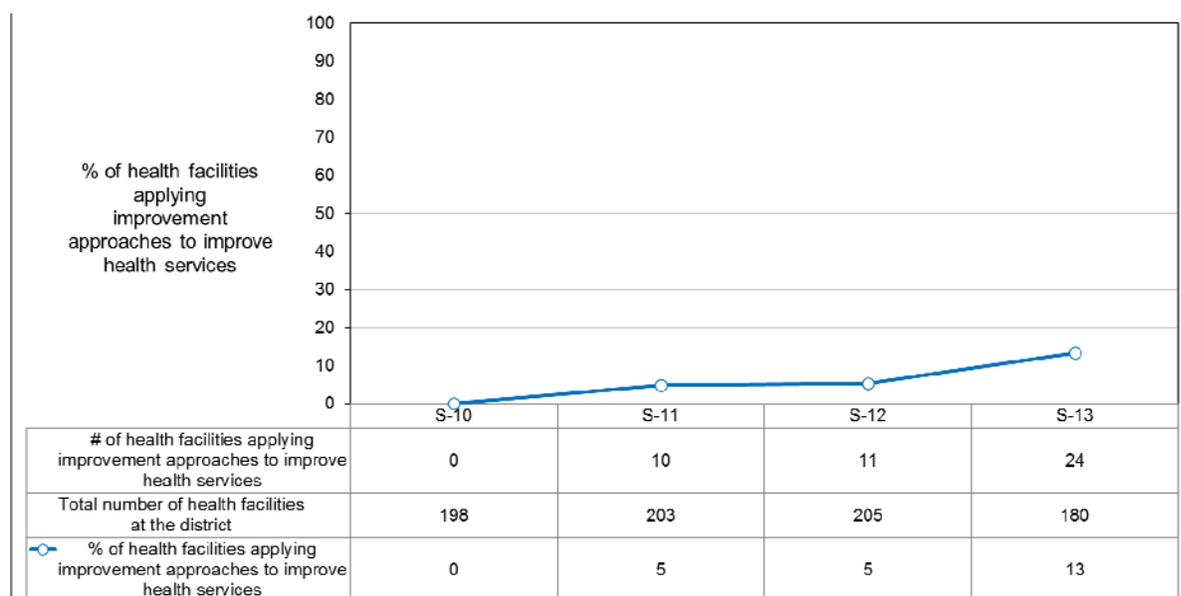
Project advisors asked CHMT members to apply the self-assessment tool on QI competencies every six months. Project coaches used the results to guide their discussion and support to CHMTs at each visit.

**Figure 1. Percentage of management team members with basic set of improvement competencies, March 2011 – September 2013**



The second indicator, shown in **Figure 2**, looked at the impact of CHMT support on the implementation of improvement activities by the facilities they supervised. A small gain was achieved for this indicator: the percentage of facilities implementing any health care improvement activities rose from 5% in September 2011 before the intervention started, to 13% in September 2013.

**Figure 2. Percentage of health facilities applying improvement approaches to improve health services, September 2010 – September 2013**

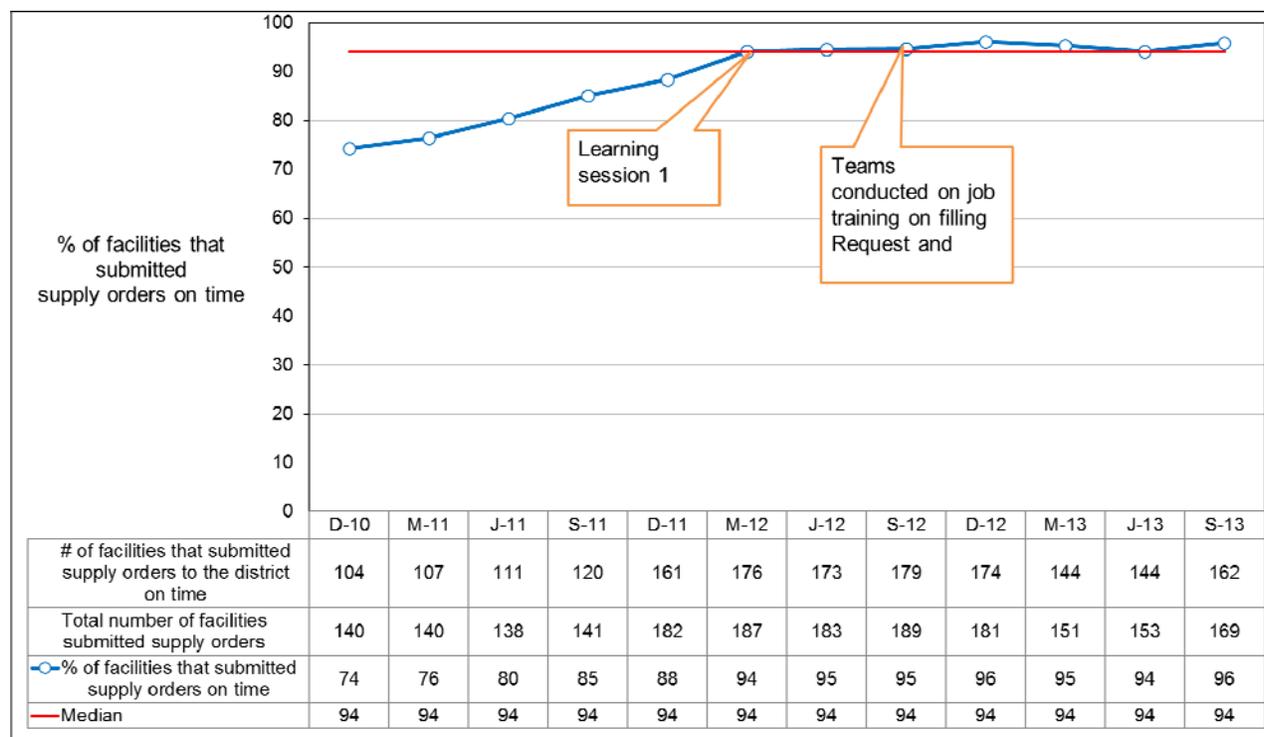


## 2. Supply management

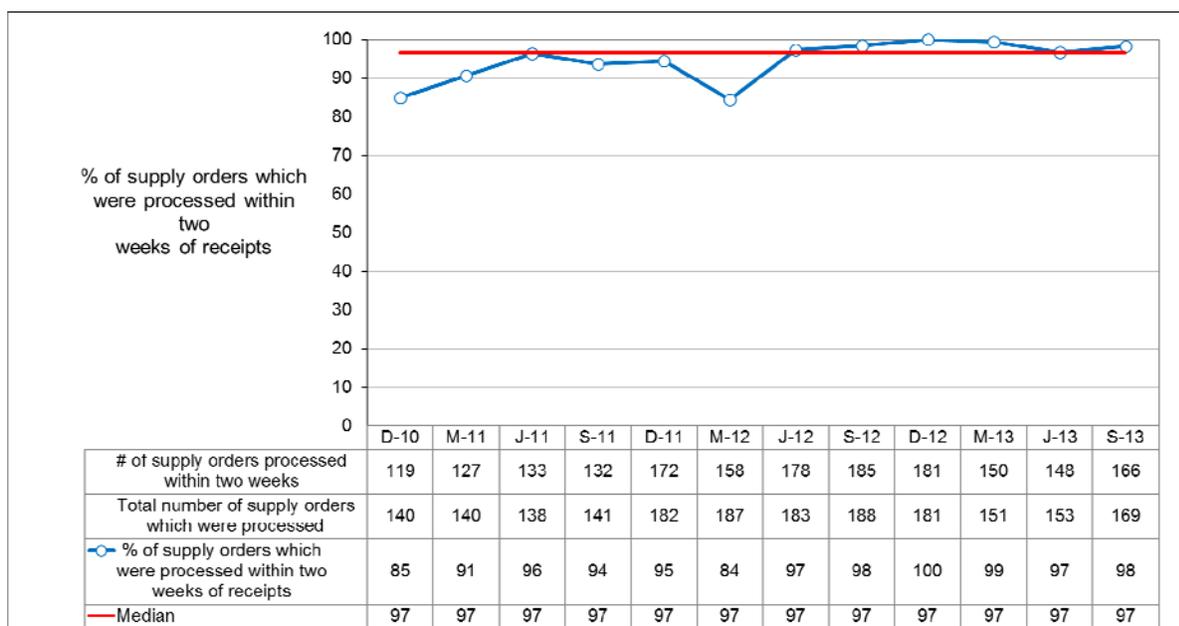
CHMTs tracked two indicators of supply management, both related to timely submission of supply orders by the facilities that the district supervised and timely processing of the orders received. **Figure 3** shows

that facilities were able to submit their supply orders in a more timely way, increasing on-time submission from 74% of orders in December 2010 to 96% in September 2013. Even more important than timely submission, the other aspect that improved was the correct completion of the forms. At baseline, the proportion of orders submitted on time was already fairly high, but district pharmacists complained that quantification, forecasting, and correct completion of the forms were still problems. As a result, there was a constant back and forth movement of forms for correction between health facilities and the respective district pharmacist. Training conducted in September 2012 on how to fill the out Requesting and Reporting (R&R) forms minimized unnecessary errors. In one district, the pharmacist also distributed his mobile phone number to the facilities having difficulties completing R&R forms so they could seek his technical support as needed. Processing of these orders also improved, although baseline performance was already high: the percentage of supply orders processed by the CHMT within two weeks increased from 85% at baseline to 97% in September 2013 (Figure 4).

**Figure 3. Percentage % of facilities that submitted supply orders on time, December 2010 – September 2013**



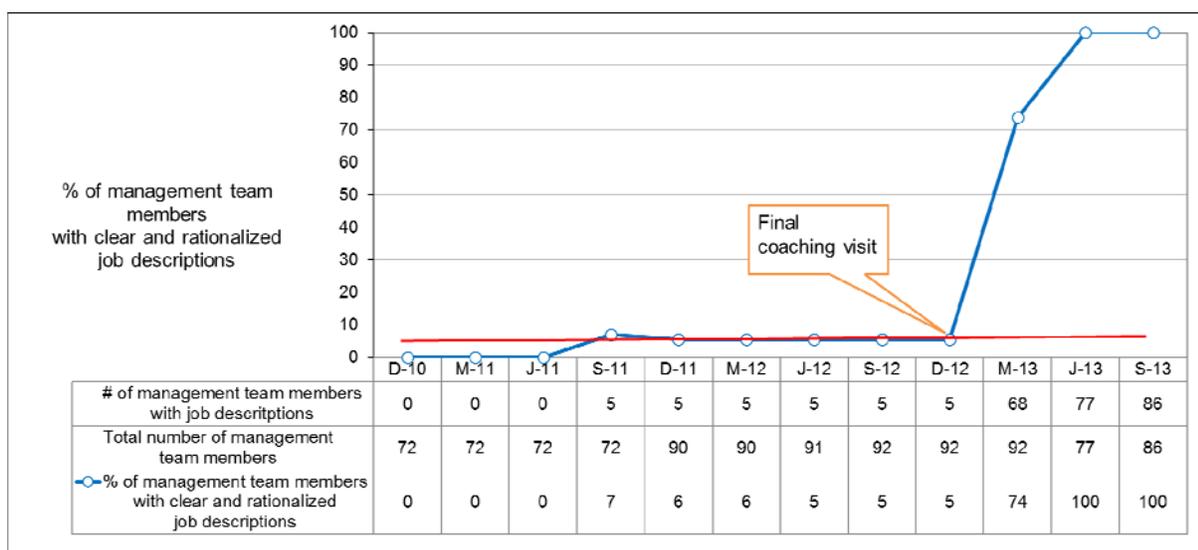
**Figure 4. Percentage of supply orders which were processed within two weeks of receipt, December 2010 – September 2013**



### 3. District management and planning

Based on the prior human resource management improvement work in Tandahimba District of neighboring Mtwara Region, project advisors encouraged the members of the six CHMTs to examine and improve their own job descriptions to make sure they were consistent with the actual duties and responsibilities team members were performing and could serve as tools for the teams' own performance improvement. The CHMTs did not make much progress on this indicator until the final coaching visits by ASSIST staff, who worked with the CHMT members to draft individual job descriptions. As shown in **Figure 5**, little progress was made on this indicator until the end of the intervention period, when the percentage of CHMT members with clearly defined job descriptions jumped to 86%.

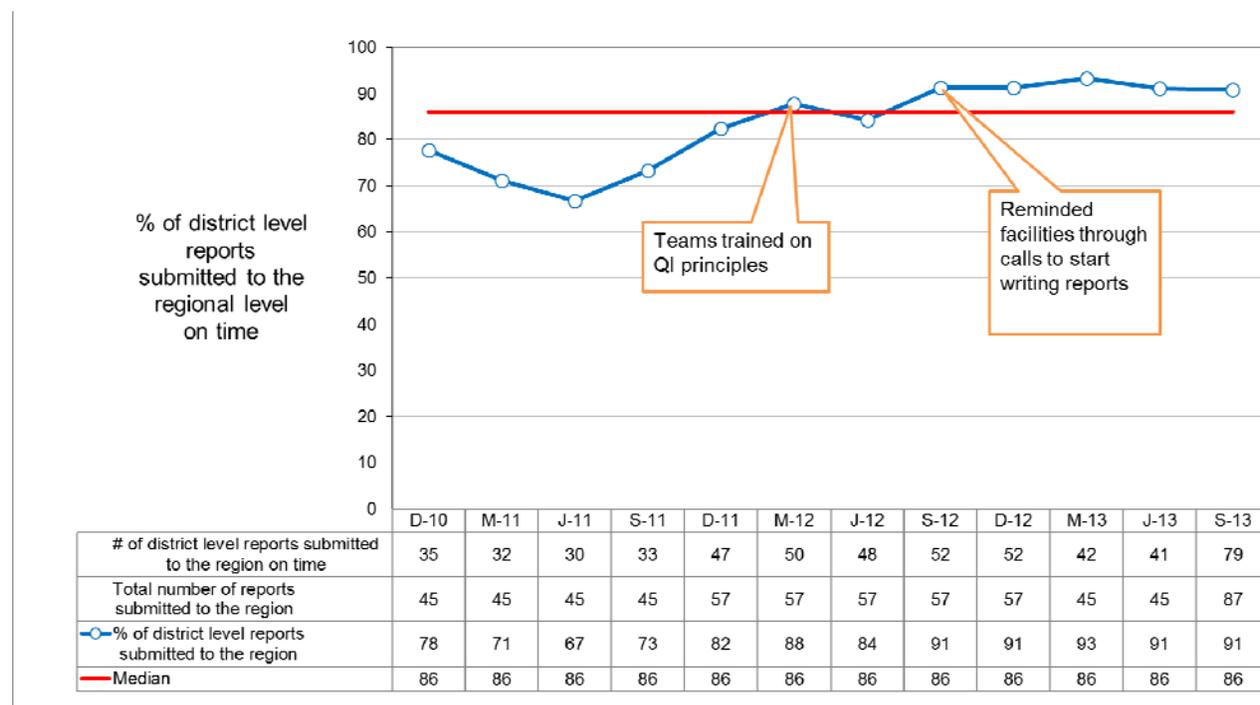
**Figure 5. Percentage of management team members with clear and rationalized job descriptions, December 2010 – September 2013**



#### 4. Information management

Timely submission of required reports by the district was another area that the CHMTs sought to improve. **Figure 6** shows that performance on this measure improved from 78% at baseline to 91% by September 2013. Most of this improvement came from the more rural districts, since the urban-centered districts (Lindi Municipal and Lindi) were already submitting all their reports on time.

**Figure 6. Percentage of district-level reports submitted to the regional level on time, December 2010 – September 2013**



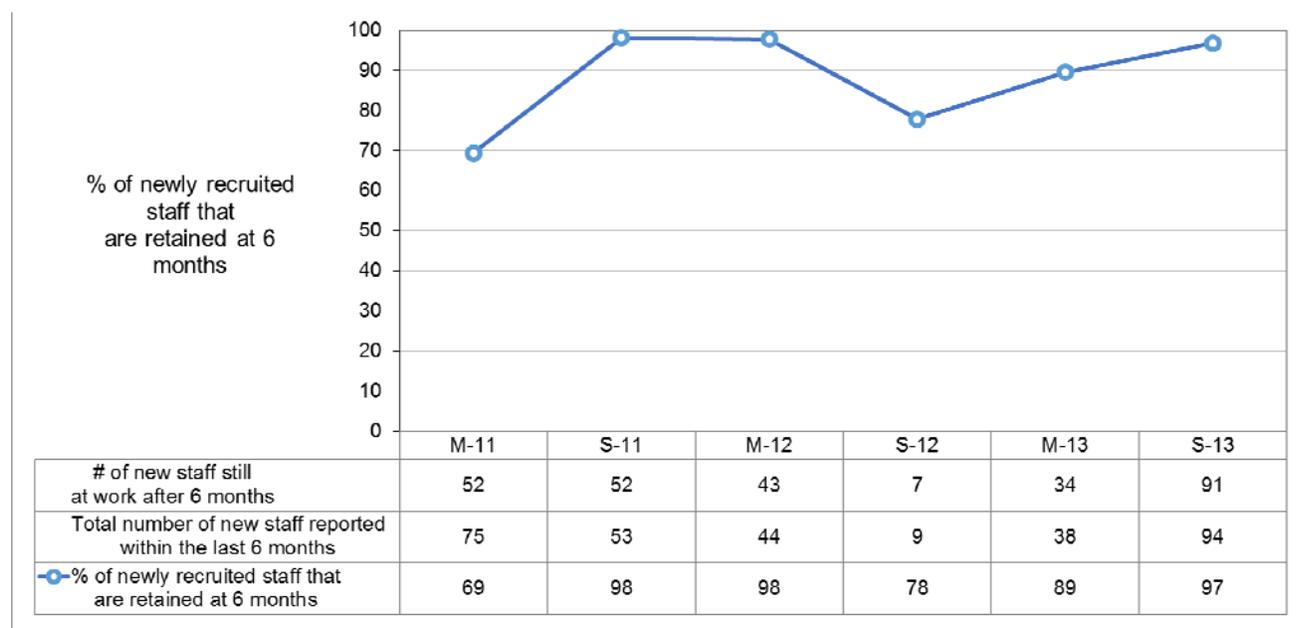
#### 5. Human resources management

The six CHMT improvement teams tracked four indicators of human resource management performance. The first two, shown in **Figures 7** and **8**, reflect improvements in on-boarding of new staff and retention of new staff at six months. While the orientation of new staff initially dipped in September 2012, the CHMTs made a concerted effort to expand the use of a standard orientation package. One member of each CHMT was also assigned to be in charge of new staff orientation, and the District Health Secretary was asked to report on the proportion of new staff who were given orientations as per the standards package. The proportion of new staff who received a timely orientation showed an increase from 69% at baseline to 97% by the last measurement in 2013 (**Figure 7**).

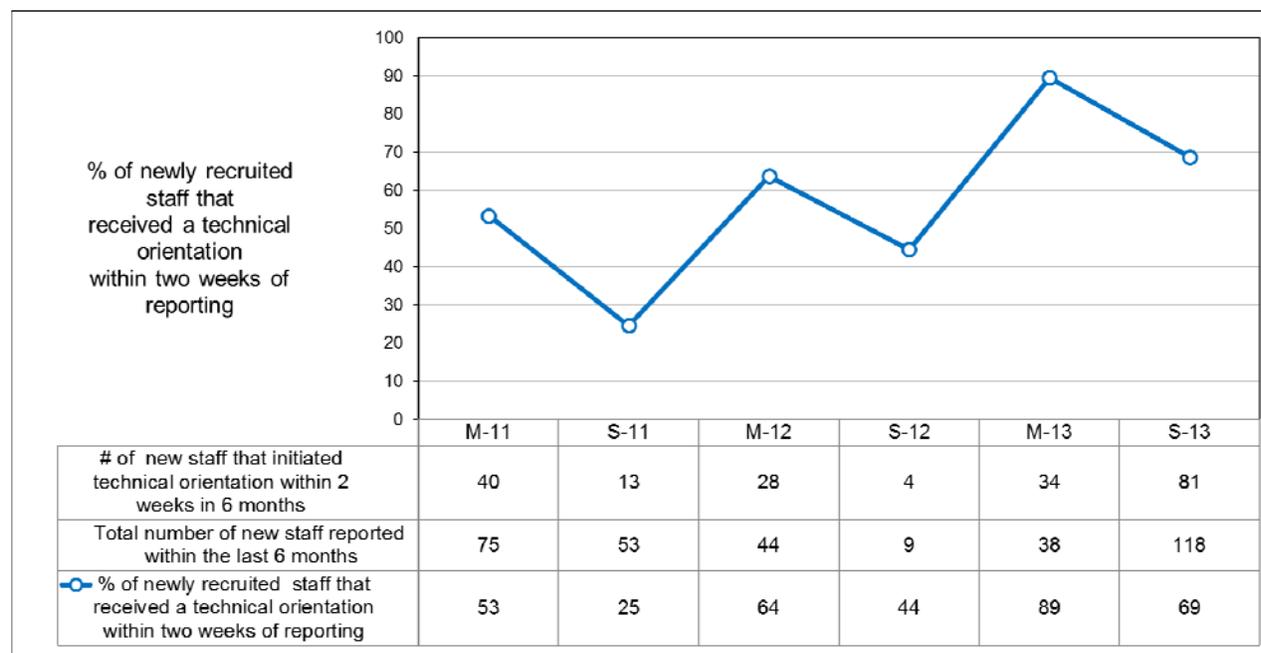
**Figure 8** shows that retention of new staff at six months remained high despite a large increase in the number of new staff reporting. At the same time, over the course of the improvement work, CHMTs recognized that a better indicator would be to track retention after 12 months at post instead of only six months. Retention at 12 months was not measured during the intervention, largely because of the short 18-month implementation time frame. CHMTs was observed that some new staff did not leave at six months but rather waited to quit until they were on the payroll and received confirmation letters for employment, which often happened after six months.

When the retention rate dropped in September 2012, the districts tried two new strategies to retain new staff: 1) They ensured orientations were conducted in a timely way, and 2) they introduced an incentive scheme: providing accommodation and a subsistence allowance to the newly reporting staff.

**Figure 7. Percentage of newly recruited staff that received a technical orientation within two weeks of reporting, March 2011 – September 2013**

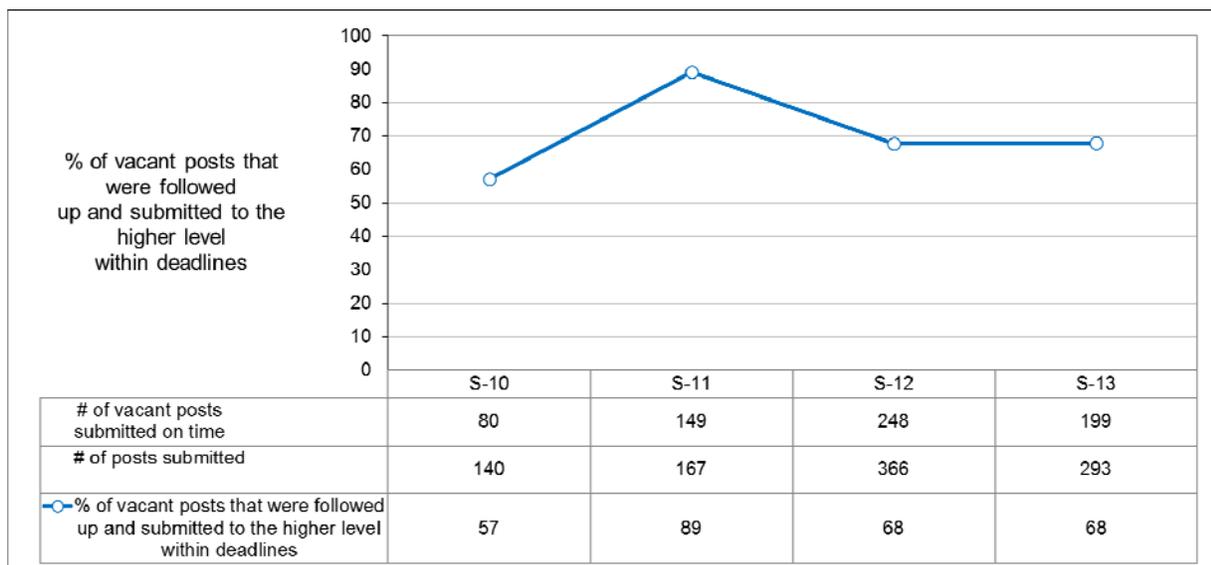


**Figure 8. Percentage of new staff that are retained at six months, March 2011 – September 2013**



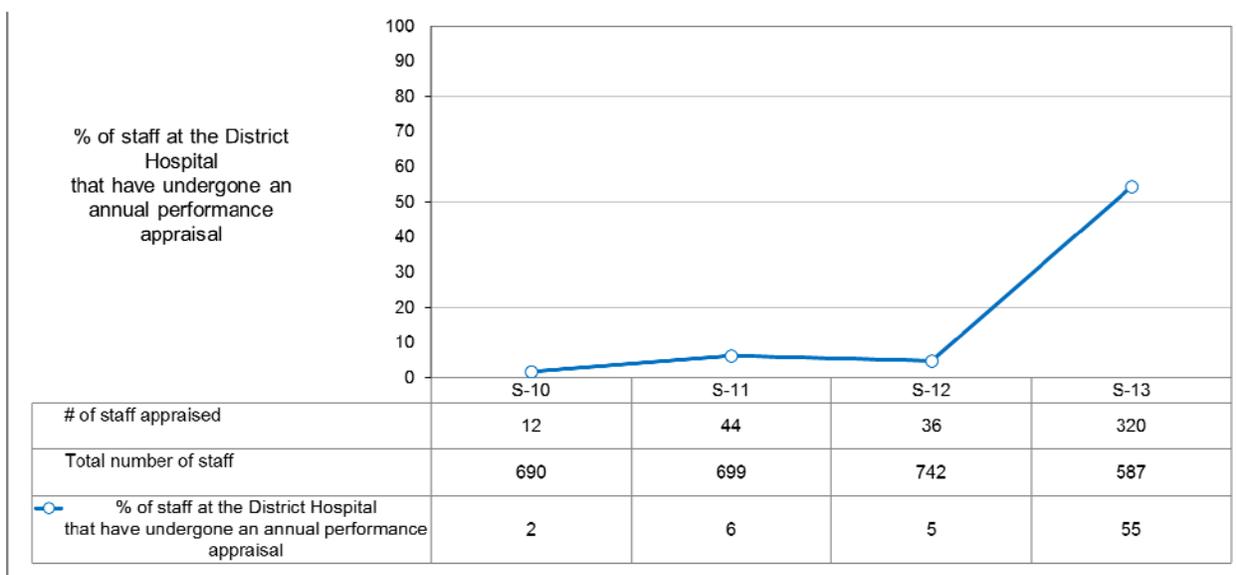
**Figure 9** shows another measure of improved HRH management: the proportion of vacant post notifications that were followed up and submitted to the regional level within deadlines. While the number of vacancies submitted to the regional level increased during the intervention period, the proportion of these that were submitted within deadlines remained steady at 68%.

**Figure 9. Percentage of vacant posts that were followed up and submitted to the higher level with deadlines, September 2010 – September 2013**



**Figure 10** shows a measure of increased frequency of performance evaluations: The proportion of staff at the District Hospital who received an annual performance appraisal. This indicator jumped from 5% at the start of the intervention to 55% by September 2013. In April 2013, the Lindi CHMTs received a detailed guideline from the MOHSW explaining exactly how the OPRAS evaluations were to be carried out. The CHMTs determined that those who had been trained by the MOHSW initially would review the guidelines and then train the other members of the team so they would be able to administer the evaluations themselves. In addition to these measured improvements, ASSIST staff observed that by September 2013, all CHMTs had clearly defined roles and responsibilities within the team.

**Figure 10. Percentage of staff at the District Hospital that have undergone an annual performance appraisal, September 2010 – September 2013**



## B. High-Impact, Low-Resource Changes that Improved Management Performance

Six months after the end of the intervention to improve district management functions in the Lindi Region, the six CHMTs and Lindi RHMT came together with representatives from two facility-level improvement teams for a two-day “harvest meeting” in April 2014. The USAID ASSIST Project organized the meeting to engage participants in reviewing their experiences, gathering lessons learned, and developing guidance for other districts. Through a series of round-table discussions, participants identified those practices they believed led to improvements in management performance as well as remaining challenges. The following sections summarize the key changes that participants in the meeting considered worthwhile to recommend to other district management teams in Tanzania and beyond.

### 1. Quality improvement

A primary responsibility of each CHMT is ensuring that facilities in the district deliver care according to MOHSW standards. In addition, part of the management responsibility of CHMT members is to understand and internalize QI principles and practices. To be able to ensure that quality services are delivered in their districts and to be effective in coaching facility teams to monitor the quality of the care and services they provide, district managers need to be able to assess the quality of services delivered in their district, identify gaps, help facilities to design and implement changes to close gaps, and then spread changes that are successful to all of the facilities in the district.

While the district management improvement intervention led to only small increases in the proportion of health facilities in Lindi that were engaged in QI activities, CHMT members did feel more competent in how to support improvement by the end of the intervention, suggesting that over time this indicator should continue to rise.

During the harvest meeting, CHMTs identified the following practices that proved effective and that they felt should be continued to strengthen facility-level QI in their districts and should be shared with other CHMTs in Tanzania and other district management teams in similar country contexts:

- **Budgeting of improvement activities:** Improvement practices are an investment in quality of care. Improvement requires that time be set aside to meet to assess, discuss, document, and review results. The returns on the investment can be demonstrated through documented results (gains in compliance with MOHSW standards) to justify the resources and time dedicated to improvement activities.
- **Capacity building:** Improvement practices strengthen the ability of managers at all levels to manage their own performance, document gaps and improvements in service delivery, and monitor performance. Practice built confidence as providers and managers alike learned to how to identify performance gaps, test changes, track indicators, and recognize if the changes had brought improvement. This strengthened capacity was identified by the CHMTs and the RHMT as one of the strongest benefits of the district management improvement intervention.
- **Incorporating improvement into routine reporting and planning:** CHMTs recommended that QI be included as an agenda item in every CHMT meeting to raise the visibility and awareness of QI activities. Several CHMTs incorporated QI activities into their CCHPs. Management team members also recommended that supervisors should add one day onto the semi-annual planning meetings that each CHMT has with facility representatives to discuss QI activities as well as hold quarterly review meetings on issues related to improving health services quality (for example, review progress on improvement activities, discuss how to improve quality of data, etc.).
- **Coaching facilities in QI:** ASSIST staff from Uganda who participated in the Lindi harvest meeting shared their experience with the use of coaching guides to lead conversations and planning at each coaching visit. Based on the discussion, ASSIST staff in Tanzania developed a coaching guide for use by district and regional managers in Tanzania (see **Appendix 2**).

- **Supporting facilities to organize QI activities:** CHMTs thought they should develop a guideline for how to implement QI activities at the facility level, including suggested activities like encouraging facilities to appoint a QI focal person in the facility and including QI activities in the agenda of regular facility meetings.

## 2. Supply management

Stock-outs of needed medicines and shortages of supplies compromise quality of care and confidence in health facilities and contribute to under-utilization of services. Consistent and accurate ordering, delivery, and stocking of commodities are essential for quality of care, and the CHMT plays an important role in monitoring supplies in the district's facilities, receiving and submitting requisitions for the facilities, and addressing gaps in availability of commodities. Effective district managers can mitigate the effects of delayed medicine deliveries by facilitating the re-distribution from one district facility to another and/or responding to urgent unmet needs by purchasing stop-gap commodities from private distributors.

Effective practices implemented by the CHMTs in Lindi to improve supply management included the following:

- **Training facility staff:** District pharmacists conducted on-the-job training for staff in facilities to build capacity in supply management. In addition, district pharmacists began communicating with facilities directly through mobile phones to coach them in filling out the forms. The CHMTs recommended that at least one health provider should be trained at each health facility to correctly complete the requisition forms. Training on the Integrated Logistics System (the online ordering system in Tanzania) will make ordering more accurate and automatic, once the system is available to all facilities. Even with training, continuous supportive supervision is needed to reinforce training and provide oversight.
- **Incentives:** Provide incentives to facilities that bring in forms on time, such as bonuses, prompt reimbursement of bus fare, and providing per diems, when possible.
- **Reminders:** Set the deadline for submission of requisition forms to go from the facilities to the district and from the district to the Zonal Medical Store. Send warning letters to late submitters.

## 3. District management and planning

One of the primary responsibilities of the CHMTs is the annual planning of priorities, strategies, staffing, and allocation of resources for all facilities in the district. The annual plans of the CHMTs are submitted to the regional level for synthesis into the regional plan submitted to the national level. To support the delivery of quality HIV and other services, district managers need to develop evidence-based, budgeted plans that respond to the needs of the population and that target gap areas and quality requirements.

At the harvest meeting, CHMT representatives identified the following strategies to improve planning:

- **Team collaboration:** A key to successful improvements in management practices is the cooperation and collaboration of the management team. The CHMTs reported the practice of meeting with their coach brought them physically together monthly and required them to discuss challenges and to problem-solve. This practice built better lines of communication and improved team work, improving not only their performance indicators but also their satisfaction about the way they worked together.
- **Using reports to inform plans:** The CHMTs of Lindi were just beginning to refer to clinical indicators (such as the seven national HIV indicators) toward the end of the intervention. The CHMTs had not institutionalized the practice of reviewing quarterly reports to inform their planning and strategies but acknowledged that doing so could more quickly guide them to improve performance. In addition, CHMTs acknowledged other sources of information that should be used for the planning process. For example, twice a year, facilities come together with representatives from the community to review

the performance of the health facilities and the concerns of the community. From these discussions, they plan the next six months' improvement strategies and make recommendations for better cooperation. CHMTs and facility representatives at the harvest meeting recommended that the proposals and plans from these meetings also be incorporated into district planning.

- **Budgeting for improvement:** CHMTs are supposed to spread the QI approach to health facilities but recognized it was hard for them to support QI when they had no budget for these activities. During the intervention, CHMTs were advised to include budgets for QI activities such as learning sessions and coaching/mentoring visits in their plans in terms of both financial resources and level of effort. CHMTs in Lindi did budget for QI activities for the fiscal year 2013-2014. District managers also recommended all CHMTs keep a sizeable basket fund to support QI activities. They also noted resources need to be budgeted for facility-level improvements. The facilities do not have a basket fund and need specific budgets to cover time and any necessary resources required for improving care delivery.

#### 4. Information management

Information flow between facilities, districts, and the regional level allows monitoring of data on public health and disease-specific information. It also enables the tracking of trends and the compilation of evidence to inform decisions and response strategies. Facilitating the collection, management, dissemination, and application of that information is a key role of the management teams at the district level.

Previously the Clinton Health Access Initiative employed data clerks for all of the districts in Lindi, but when external funding for the positions ended, the government could not continue to employ the data clerks. Now the facilities in each district prepare and submit their reports to the District AIDS Control Coordinator (DACC). This person is responsible for compiling and analyzing collected data. The Ruangwa CHMT has been able to employ a data clerk, who visits the facilities, collecting reports and providing technical assistance as needed. This support has contributed to more timely and accurate report submission to the region.

The CHMTs participating in the harvest meeting recommended the following strategies to improve the submission of data and required reports and overall information management:

- **Use of incentives:** "Pay for Performance" mechanisms have shown to improve the timeliness, accuracy, and thoroughness of reporting from the facilities. For example, Nachingwea District was able to show its performance indicator for timely reporting improved because a bonus was paid to the health worker responsible for completing and submitting each facility's report.
- **Use of reminders:** One district (Liwale) introduced a reminder letter sent to facilities one week before the reports are due. Then a second reminder goes out if the reports are not received on time. If the report is not submitted after the second reminder, the facility is visited by a member of the CHMT to assist on resolving the obstacles to timely reporting. This district was able to increase its submission of on-time reports to the regional level from 70% when this change was introduced to 100% for each of the subsequent three quarters.
- **Setting a schedule for reporting:** The Lindi Region set the 17<sup>th</sup> of the month as the date by which all CHMTs must submit their consolidated district report to the region. To ensure that the reports are collected and processed at the district level, a due date of the 7<sup>th</sup> of the month was set as the date by which facilities should submit their reports to the district. This allows 10 days between the receipt of the reports from the facilities and the submission of the consolidated report to the region.
- **Providing training and coaching support:** The Kilwa CHMT provided training to facilities on submission of recording and report forms as well as supportive supervision and coaching related to reporting. They also made sure all facilities had a regular supply of necessary forms.

- **Accountability at each step of the process:** One CHMT member or clerk/assistant of the CHMT Medical Officer should be assigned the responsibility and accountability for collecting the reports from CHMT members, preparing them for submission according to regional office requirements, and submitting them to the RHMT by the quarterly deadline.
- **Providing feedback:** Feedback is important to continually strengthen the connections between the service levels. CHMTs in Lindi found providing feedback with guidance for improvement and recognition for good work improved the on-time submission and accuracy of reporting. They provided feedback to the facilities' in-charges during quarterly or monthly visits to the district level and also during the district supervisor's monthly visit to the facility.

An area of ongoing challenge was to create a stronger practice of review and analysis of data in the reports. The CHMT members need to work as a team to review, collect, and complete the aggregate reports for the region, but just as important, CHMT members should discuss the results of the reports, ensure data accuracy, and explain significant improvements or declines in indicators before their submission to the RHMT. However, during the course of the intervention, ASSIST staff observed that the competing demands of clinical roles that many CHMT members also carry out made it difficult for them to find time to work together as a team to review and discuss performance data.

## 5. Human resources management

District-level management in Tanzania is responsible for staffing all the MOHSW facilities in the council's catchment area. They are also responsible for managing the performance of the facility staff. These human resources management responsibilities include recruitment and retention of an adequate staff (those trained to meet the right competencies and distributed in the right mix so that they can respond to population needs); supervision (coaching, mentoring, and feedback) of facility staff; and annual performance evaluation of facility staff.

CHMTs tried different solutions to HR management challenges. During the harvest meeting, the different teams shared some solutions that were particularly effective, recommending that those be included in this guide to share with other CHMTs, who face similar challenges. The following changes tested to improve retention, supervision, and performance evaluation were recommended by the CHMTs in the harvest meeting:

- **Establishing a new hire orientation package:** CHMTs in Lindi developed a standardized orientation procedure so that when new staff arrived, there would be a process in place for orienting the arriving staff and a person assigned to implement the orientation. Some CHMTs developed a three-week long orientation package to include technical, administrative, and cultural training. In addition, the process included courtesy visits by key CHMT members and planned social events. In Kilwa District, new employees are now given OPRAS forms and job descriptions as part of their orientation.
- **Making accommodations available for new hires:** Many times health workers would arrive at the district before the management team had been notified and before the payroll mechanism for the new staff was in place. Because of these factors, there may have been no accommodations available or affordable because the new staff's salary will not arrive until their payroll account is activated. To resolve the accommodations challenge, CHMTs secured a space to always be available and equipped it with basic necessities, such as a bed, chair, table, bedding, and basic kitchen furnishings. In some districts, this temporary housing was labeled the "Big Brother House."
- **Providing a stop-gap stipend:** CHMTs found that the salary of a new staff would sometimes not arrive for as long as six months after their first week. CHMTs used basket funds to provide a limited stipend that would allow the new staff to meet their basic needs until the salary arrived. The advance would be reimbursed through deductions made from the salary payment. An alternative solution that was attempted was to send the arriving staff back home until the salary was initiated. This

intervention was useful in some cases but was not considered to be a 'best practice' because in a number of cases, the health worker did not return.

- **Recruiting from local training schools:** Studies have shown that health workers who are recruited from their own geographic areas are more apt to be retained. CHMTs began a proactive recruitment from local training schools. This outreach included visits to the schools, job fair presentations, actively recruiting candidates on rotation in the facilities, and asking students on rotation to specifically request placement at that facility. Evidence suggested that this intervention was effective. Two cases were documented of staff in Lindi that described their placement request as coming directly from targeted recruitment from the facility and their positive experience during their rotation at the facility.
- **Recognition for good work:** To help retain staff and raise the satisfaction of health workers, some CHMTs began a practice of writing letters of appreciation to specific staff who had been nominated for such recognition by facility managers. They also created certificates of appreciation for facilities for public display. Other CHMTs asked the entire health facility team to applaud each other in recognition for specific achievements reached by the facility.
- **Evaluations:** District managers completed one-year evaluations of the hospital staff, enabling strong performers to be eligible for promotions.
- **Checklist for supervision:** One CHMT developed a list that standardizes activities for district managers to carry out during monthly supervision of facilities. As opposed to the previous checklist with items to be inspected, this new checklist suggested activities to be performed during the visit, such as joint problem-solving and providing feedback. This new list was incorporated into the region's supervisory visit checklist.
- **Pooling resources:** One CHMT pooled resources from 'basket funds' (which serve as a surplus account) to maintain a vehicle and cash reserve for fuel so that a vehicle could be designated only for use by CHMT members for visits to the facilities. The practice did not prove effective, however, because the CHMT was not successful in reserving such a coveted resource for only one purpose. A change idea that was successfully implemented was the assignment of one CHMT member to be responsible for confirming the supervision schedule with all CHMT members each month and for securing the transport vehicle and fuel. The CHMT reported that clarifying the role and responsibility for that task was helpful, but did not address the other obstacles, such as when vehicles were unexpectedly diverted for other purposes.

In addition to these tested changes, the RHMT members who participated in the harvest meeting suggested other ways of improving human resources management. First, they thought they could incorporate accountability mechanisms to provide incentives to CHMTs. RHMT members also proposed that it would be useful to clarify to CHMT members how improved supervision of facilities helps management, specifically by establishing better communication and influence with facility staff; gaining information on how the services are provided and where improvements might be made with simple, affordable interventions; finding partners among facility staff to support district objectives; and noting challenges or trends before they become serious problems.

Participants in the harvest meeting also noted challenges that persist. They noted that supervision is still equated with judgment and that no manager or facility will ask for supervision. There is also a lack of incentives for managers to complete performance evaluations; there are no consequences to compel them to complete evaluations. At the same time, there is no push or expectation from health workers to have evaluations, because even without evaluations, staff receive a pay raise every three years.

Finally, it was acknowledged that regular evaluations are difficult to complete because the online OPRAS system has some limitations. First, the users described OPRAS as "impersonal" because it can be completed without any contact with the staff member. Second, because of its general nature, many CHMT members interviewed expressed the view that the system does not identify poor performers.

## C. Other Results

During the harvest meeting, CHMT representatives were asked to reflect on what other changes they had noticed in how the CHMT performs as a result of the district management improvement intervention. Results identified by each CHMT are listed in **Table 4**.

**Table 4. How CHMTs work differently since beginning the district management improvement activities**

District	How team works together differently since beginning QI
Nachingwea	<ul style="list-style-type: none"> <li>• Decisions are made by the whole team</li> <li>• Planning and implementation of activities are made by the CHMT as a team</li> </ul>
Kilwa	<ul style="list-style-type: none"> <li>• Supportive supervision, mentoring, and coaching are taking place</li> <li>• The CHMT addresses QI issues in its quarterly meeting with facilities</li> </ul>
Lindi District	<ul style="list-style-type: none"> <li>• Every CHMT member has an assigned responsibility for improvement, such as for vaccination, infection prevention and control, supportive supervision, HIV services, health commodities, and monitoring and evaluation</li> </ul>
Ruangwa	<ul style="list-style-type: none"> <li>• Spirit of teamwork has been built among CHMT members through the QI activities</li> <li>• CHMT members are sharing responsibilities to improve services, e.g., when areas of weakness have been observed at a certain health facility</li> <li>• Following supervision visits, CHMT member are sharing amongst themselves information about feedback provided to facilities, both positive and negative</li> </ul>
Lindi Municipal	<ul style="list-style-type: none"> <li>• Having monthly QI meetings</li> <li>• Providing feedback to team members after conducting any quality assessment, such as 5S, infection prevention and control, or HIV indicators</li> </ul>
Liwale	<ul style="list-style-type: none"> <li>• CHMT members are now cooperating with each other</li> <li>• Good communication with feedback</li> <li>• Respecting ideas from other members</li> <li>• Planning together</li> <li>• Assigning team members tasks for follow-up of indicators, maintaining QI data and files, and preparing schedule of QI meetings</li> </ul>

## IV. DISCUSSION

This intervention sought to strengthen the six CHMTs in the Lindi Region of Tanzania so that they would be able to perform their management functions more effectively and spread improvement practices throughout their districts, particularly for HIV services. By improving management functions at the district level, this activity was intended to provide stronger and more consistent support for facility-level improvement work and identify best practices, methods, and tools for achieving more effective, efficient, and productive management practices to support high-quality service delivery at the facility level.

**Positive effects of the intervention:** As discussed in the previous section, the intervention was successful in helping CHMTs clarify management roles and responsibilities and improving their competency and confidence in applying QI methods. It led to more timely submission of reports, more timely handling of supply orders, and greater standardization of the onboarding process for new staff. The intervention showed some evidence of improving retention of new staff at six months, although a longer period of follow-up is needed to see if the results are sustained.

The district management strengthening intervention also developed skills and confidence in CHMT members in applying an improvement approach to their own work. The CHMTs defined roles and responsibilities in their management functions and were able to assess the level at which they are

actually performing and identify gaps where they can make improvements. The six CHMTs introduced a number of changes to strengthen management functions and in so doing, strengthened relationships among CHMT members and made some gains in improving their relationships with facilities.

**Limitations of the intervention:** The logic underlying the intervention was that building QI capacity in CHMTs would not only help them to improve district management but also strengthen improvement practices in the facilities in their districts. However, the intervention did not make a significant improvement in terms of the proportion of supervised facilities engaged in service QI activities, which rose from 5% before the intervention to only 13% after 18 months of implementation. While focusing primarily on CHMTs' management functions without a direct intervention at the facility level to stimulate QI work, particularly on HIV services, may have had only limited impact on facility-level QI activities in the short run, CHMTs' increased awareness of and confidence in their role to support service quality improvement through coaching and mentoring should increase attention to facility-level QI in the medium term.

Secondly, many of the gaps identified by the district management teams in the Lindi Region required changes in systems and practices that fell outside of the CHMTs' area of direct influence. For example, stock-outs and shortages in medicines and supplies at the facility level was one gap area identified that impeded quality services in the Lindi Region. The CHMTs arranged training for facility staff to improve the accurate calculation of needs and tested changes to encourage on-time submission of accurate orders. The CHMTs also worked on improving their own collection, review, and submission of facilities' orders. However, at the zone store level, the CHMT has little influence on whether or not the zone store will fill the orders accurately and deliver the needed commodities. In fact, the zone stores often did not deliver the needed commodities due to late payments from the central government.

Because achieving the results expected in many management functions is dependent on factors that are outside of the CHMT's direct influence, the indicators selected to measure improvement in the teams' performance were process indicators rather than results indicators. For example, with regard to stock-outs and shortages in commodities, the CHMTs chose to track the facilities' completion of correct orders, the facilities' submission of orders on time, and the timely transfer of the collected orders by the CHMT to the RHMT. They did not track stock-outs as their improvement indicator, which would have been a results indicator.

Using indicators linked more closely to results and outcomes might have been more informative and perhaps led to greater action. ASSIST advisors identified those indicators that seemed to be the most appropriate for district management teams to track and that could be a starting point for future efforts to improve district management performance. These indicators are presented in **Appendix 3**.

**Remaining challenges:** It is also worth noting those management areas did not improve through this 18-month intervention. Areas that still need work in Lindi and that are difficult for all managers include: 1) Providing supportive supervision and mentoring to facility staff; 2) directly linking their district management performance improvements with service improvements at the facility level; and 3) using data reported to take stock of performance, identify areas needing attention, and adjust the implementation of CCHPs.

Supervision remains a struggle for most district managers. Geographic obstacles, weather challenges, and resource shortages all make it difficult for managers to leave their own clinical responsibilities and adequately tend to the many facilities that need support, feedback, and guidance. District managers in Lindi reported that they saw the benefits when they were able to develop better communication with facility teams and were able to work together to make improvements in care delivery. However, making those connections remains a challenge. One of the strongest recommendations that came out of the harvest meeting from district and regional managers alike, as well as the representatives from the facilities, is to make better use of the regular trips that facility managers make to the district offices by using these as an opportunity for mentoring and planning or reviewing improvement activities.

The other area where managers in Lindi still need to strengthen their capacity is to use data from facilities' reports to guide their monthly meetings and to hold themselves accountable for improved performance in service delivery at the facility level. Managers in Lindi, as in many health districts in Tanzania, need to strengthen their capacity for monitoring and evaluating clinical indicators to track improvements in the health system's ability to deliver quality care. District managers are tasked with managing the health system at the sub-national level so that it delivers quality services equally to all of the population. As part of their roles and responsibilities, district managers need to learn not only how to track indicators, document changes, and manage information, but they also need to understand how to apply that information and use it to make informed, evidence-based decisions to continually improve quality.

## V. RECOMMENDATIONS

The experience of the six CHMTs in the Lindi Region resulted in the identification of successful practices that can be adapted to other districts in Tanzania and elsewhere. Participants in the harvest meeting made the following recommendations on ways to strengthen linkages between the district management team and facilities:

- **Clarify performance improvement responsibilities of individual members of the district management team:** In Lindi, participants felt that it would be feasible for each district management team member to oversee performance improvement in the facilities she/he is responsible for, then gather information and keep track of these facilities and report to the entire district management team at the weekly meeting. Having the regional level hold district managers accountable for facility-level performance may also spur greater attention to facility-level performance.
- **Monitor facility reports to track performance, identify needs, and guide supportive supervision:** District management team members should monitor closely the monthly and quarterly reports of their assigned facilities to track performance and identify needs. Monthly supportive supervision visits should then be organized to address what the reports reveal and where the data indicate a need for attention. This strategy might result in managers spending more time with facilities that need more support.
- **Take advantage of mobile technologies to communicate more often with facility staff.** The challenge is budgeting airtime. It may be helpful for regions to collectively bargain for air time for use by the health system. In Tanzania, district management teams can also use mobile phones to contact facilities and vice-versa, to discuss how to respond to problems.

The Lindi district health management improvement intervention provided evidence for what is possible through a modest intervention in a highly resource-constrained setting. Future interventions to improve district health management should also more directly address facility-level QI, ideally linking support for district management improvement with efforts to engage facility-level staff in clinical QI work to address national priorities. Building district managers' capacity to coach QI activities is necessary but insufficient to stimulate service improvements at the facility level.

## APPENDICES

### Appendix 1: Tool for Self-assessment of QI Competencies

The tool asked each member of the CHMT to self-rate their own level of competence in selected basic improvement competencies using the following scale:

0 = None: I do not have this knowledge or ability

1 = Low: I need a lot of support to learn this knowledge or action

2 = Moderate: I need some support to improve this knowledge and my ability to do this action

3 = High: I fully possess this knowledge or I am able to do this action

Tasks	Competency requirements	Competency level			
		0	1	2	3
Explain basic concepts of improvement	Be able to explain in simple language QI concepts and principles such as a change model, plan-do-study-act cycle, testing small changes, teamwork, client focus, processes and systems, measurement, variation, shared learning.				
Conduct site level situational analysis	Be able to use appropriate tools to analyze the situation at site level including, process mapping, fishbone diagrams as appropriate				
	Be able to use relevant data and information to identify performance gaps and issues				
	Be able to develop driver diagrams				
Set site level improvement aims	Be able to identify areas for improvement based on existing data and information (site-specific areas for improvement based on local situation; not referring to overall project improvement areas)				
	Be able to develop a "SMART" improvement aim (specific/measurable/attainable/relevant/time-bound) in collaboration with key stakeholders at the site level (advanced)				
Brainstorm and develop change ideas	Be able to brainstorm and/or adapt changes to test				
	Be able to prioritize specific changes to start with based on assumptions of greatest impact informed by existing knowledge				
	Be able to apply workforce development strategies to support change ideas				
	Be able to understand why tests are started at small scale (advanced)				
Develop action plan at site level	Be able to plan tests of change by agreeing on how the change will be tested, team members and others involved in testing the change, what feedback needs to be gathered on the test, and assigning responsibilities and timelines				
Implementation of site level action plan	Be able to organize and manage implementation of test of change				
Review action plan implementation, challenges, interpreting the feedback and experience, and determine next steps	Be able to make decisions on appropriate actions to take based on the information in the graph, experiences, feedback				

## Appendix 2: QI Coaching Guide

Coaching task	Focus of coaching	Possible gaps to address with facility QI teams
<p><b>1. Assess the functionality of facility QI teams and provide support on identified gaps</b></p>	<ul style="list-style-type: none"> <li>• <b>QI team formation:</b> Ensure that QI teams have been formed, that roles/responsibilities of QI team members are clear, and that there is a QI team lead</li> <li>• <b>Regular team meetings:</b> Ensure that QI team meetings are conducted on a weekly basis and check for the following documents: journals, meeting calendar, and minutes of the previous QI team meeting</li> </ul>	<ul style="list-style-type: none"> <li>• QI team roles/responsibilities unclear</li> <li>• No minutes from meetings</li> <li>• Meetings not being held monthly</li> </ul>
<p><b>2. Assess understanding of indicators and concepts of numerator and denominator</b></p>	<ul style="list-style-type: none"> <li>• <b>Definition</b> of numerators and denominators for indicators</li> <li>• <b>Understanding of indicators and their importance:</b> Talk through indicators with teams; see if QI team documentation journals are being used; and find out if data are being collected and recorded and whether teams know where to get data for assessing service quality</li> <li>• <b>Use of data for decision-making</b></li> </ul>	<ul style="list-style-type: none"> <li>• Lack of clarity of numerator/denominator concept</li> <li>• Inability to determine source of data for numerator and denominator</li> <li>• Inadequate documentation</li> </ul>
<p><b>3. Review progress on mapping service delivery/processes and provide support on overcoming barriers</b></p>	<ul style="list-style-type: none"> <li>• Verify documentation of service delivery/processes that have been mapped</li> <li>• Review services/processes that have been mapped</li> <li>• Ensure that QI teams have mapped the services/processes as they currently are, not how they should be</li> <li>• Find out how many services/processes have been mapped out initially and how many remain to be mapped out</li> <li>• Determine if QI teams have conducted process analysis based on the initial mapping – look for documentation in journal, minutes of meetings etc.</li> <li>• If teams have conducted process analysis, review what changes they are testing to improve processes and look for</li> </ul>	<ul style="list-style-type: none"> <li>• Mapping of service delivery and processes has not been conducted</li> <li>• No documented changes tested/conducted</li> <li>• No documented process analysis/re-design</li> <li>• Lack of knowledge on how to use journal</li> </ul>

Coaching task	Focus of coaching	Possible gaps to address with facility QI teams
	<p>documentation</p> <ul style="list-style-type: none"> <li>If teams have not yet conducted process analysis based on the mapping, have the team analyze and walk through a redesign of a process</li> </ul>	
<p><b>4. Provide onsite training on formulation and testing of changes, documentation and plotting data on run charts</b></p>	<ul style="list-style-type: none"> <li>Reviewing completeness and accuracy of the team's QI documentation journal (QI teams should be documenting all changes tested)</li> <li>Review collected data and provide guidance on discrepancies</li> <li>Work with teams to analyze data</li> </ul>	<ul style="list-style-type: none"> <li>Inadequate understanding on how to fill the team documentation journal</li> <li>Data/process analysis not being documented</li> </ul>
<p><b>5. Discuss next steps with QI teams and develop action plans</b></p>	<ul style="list-style-type: none"> <li>Teams need to map all service delivery/processes for ART/PMTCT care in their site</li> <li>After mapping all initial services, teams should redesign processes and test changes for improvements</li> <li>After testing changes in different situations, teams should analyze workload of individuals involved in ART/PMTCT care and continue testing changes for improvement of service delivery</li> </ul>	<p>N/A</p>

### Appendix 3: Suggested Indicators for Monitoring District Management Performance

The list below shows the indicators for monitoring district health management performance that were considered the most useful by ASSIST advisors. While some of these indicators were not initially tracked by the CHMTs in Lindi, at the time of the harvest meeting, ASSIST and the CHMTs determined that they were important indicators to track progress toward closing gaps in district management performance.

Indicator	Denominator	Numerator	Management Domain
<b>Monthly measurement interval</b>			
% of facilities visited for supervision <i>(results indicator)</i>	Number of facilities in the district	Number of facilities visited for supervision	Human resources management: Supervision
% of facilities receiving coaching for QI <i>(results indicator)</i>	Number of facilities in the district with QI teams	Number of QI teams coached	QI
<b>Quarterly measurement interval</b>			
% of facilities that submitted supply orders on time <i>(process indicator)</i>	Number of facilities in the district	Number of facilities submitting supply orders on time	Supplies and logistics
% of supply orders which were processed within two weeks of receipt <i>(process indicator)</i>	Number of supply orders received	Number of received orders submitted to regional office within two weeks of receipt	Supplies and logistics
% of district level reports submitted to the region on time, accurate, and thorough <i>(process indicator)</i>	Number of reports required by the regional level	Number of complete and accurate reports sent on time	Health information systems
Improve HIV quality of care <i>(results indicator)</i>	Number of HIV quality of care indicators	Number of indicators that showed improvement	QI
<b>Semi-annual measurement interval (every six months)</b>			
% of newly recruited staff that are retained at six months and at 12 months <i>(results indicators)</i>	Number of new staff arriving at the district level	Number of new staff still retained at six months Number of new staff still retained at 12 months	Human resources management: Recruitment and retention
% of management team members with basic set of improvement competencies <i>(process indicator)</i>	Number of members in the district management team	Number of team members that score above 75% on the 11-point self-assessment tool	QI
<b>Annual measurement interval</b>			
% of health facilities applying QI to health services <i>(results indicator)</i>	Number of facilities in the district	Number of health facilities that are applying QI to health services	QI
% of staff that have undergone an annual performance appraisal <i>(results indicator)</i>	Number of staff in the district	Number of staff who have completed an annual performance appraisal	Human resources management: Performance evaluation
All district management teams define their goals, roles, and responsibilities <i>(process indicator)</i>	Number of district management teams in the region	Number of management teams that have written team goals, team roles, and team member responsibilities and tasks	QI



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