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RESEARCH AND EVALUATION REPORT

The Partnership for Quality Improvement to Improve PMTCT and ART Services in Tanzania: Assessment of Results, Capacity, and Potential for Institutionalization

JUNE 2011

This report was prepared by University Research Co., LLC (URC) for review by the United States Agency for International Development (USAID). It was authored by the Tanzania Partnership for Quality Improvement (PQI) Study Team (in alphabetical order: Timothy Dawo, Faridah Mgunda, Edward Moshi, Jared Musanga, Davis Rumisha, Hobokela Stephen, and Edgar Turuka of URC's team in Tanzania) and URC headquarters team (Lynne Miller Franco, Diwakar Mohan, and Karen Askov Zeribi). The PQI evaluation in Tanzania was funded in part by the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) and carried out under the USAID Health Care Improvement Project, which is made possible by the generous support of the American people through USAID.

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DISCLAIMER

The views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development (USAID) or the United States Government.

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ACRONYMS

ANC	Antenatal care
ART	Antiretroviral therapy
ARV	Antiretroviral
CTC	Care and Treatment Center
CHAI	Clinton Health Access Initiative
CHMT	Council Health Management Team
CQI	Continuous quality improvement
DMO	District Medical Officer
DSW	Department of Social Welfare
EGPAF	Elizabeth Glaser Pediatric AIDS Foundation
FHI	Family Health International
GTZ	<i>Deutsche Gesellschaft für Technische Zusammenarbeit</i> (German Technical Assistance Agency)
HCI	USAID Health Care Improvement Project
HIV/AIDS	Human immunodeficiency virus/acquired immunodeficiency syndrome
ICAP	International Center for AIDS Care and Treatment Programs
IP	Implementing Partner
JICA	Japan International Cooperation Agency
LS	Learning session
LTFU	Lost to follow-up
M&E	Monitoring and evaluation
MoHSW	Ministry of Health and Social Welfare
MVC	Most Vulnerable Children
NACP	National AIDS Control Program
PDSA cycle	Plan, Do, Study, Act Cycle
PMTCT	Prevention of mother-to-child transmission of HIV
PQI	Partnership for Quality Improvement
QI	Quality improvement
RCH	Reproductive and Child Health
RHMT	Regional Health Management Team
TB	Tuberculosis
TQIF	Tanzania Quality Improvement Framework
URC	University Research Co., LLC
USAID	United States Agency for International Development

EXECUTIVE SUMMARY

Introduction

The USAID Health Care Improvement Project (HCI), implemented by University Research Co., LLC (URC), was asked by the United States Agency for International Development (USAID) in 2007 to assist the Tanzanian Ministry of Health and Social Work (MoHSW), regional and district level stakeholders, and implementing partners to set up a countrywide quality improvement (QI) program for HIV services in line with the Tanzania National Quality Improvement Framework (TQIF). Specifically, the QI program was to be directed at antiretroviral therapy (ART) and prevention of mother-to-child transmission (PMTCT) services. The QI program soon became known as the Partnership for Quality Improvement (PQI). The main aims defined for the PQI were to:

- Build capacity for a harmonized QI approach among the many implementing partner (IP) organizations working this area, thereby accelerating the speed of and increasing the resource pool for QI in Tanzania;
- Strengthen capacity for QI at national, regional, district and health facility levels (particularly in light of recent health care reforms to decentralize health services);
- Demonstrate the effectiveness of collaborative improvement methods in improving patient outcomes in a limited number of regions (a prototype prior to spreading to additional regions).

URC Tanzania is working together with the National AIDS Control Program (NACP) and the Dutch non-governmental organization, PharmAccess Foundation, to develop and implement the PQI. PQI was first launched in Tanga in May 2008 in partnership with AIDS Relief; the second region, Morogoro, was added in February 2009 in partnership with Family Health International (FHI); and the third region, Mtwara, was added in June 2009 with The Clinton Health Access Initiative (CHAI) and Elizabeth Glaser Pediatric AIDS Foundation (EGPAF). CHAI and EGPAF also committed their own funding and began to replicate PQI in late 2009 to the Lindi Region.

The goal of this evaluation is to assess how well PQI has worked in the three first regions (Tanga, Morogoro, and Mtwara) and to identify how the approach could be further strengthened or modified for spreading to other regions in Tanzania in the future. In this evaluation we explore the following aspects of the PQI:

1. Describe how the PQI evolved, specifically by studying:
 - a) Modifications made to the original design of the PQI.
 - b) How learning (about initiating, implementing, supporting, and institutionalizing QI) has spread between implementing partners operating in different regions and explore if there are further opportunities to build upon this knowledge/ experience.
2. Assess the effectiveness of PQI, specifically by exploring:
 - a) Results achieved by health facilities participating in improvement collaboratives in terms of improving the quality of care and patient outcomes.
 - b) Implementing partner and Regional and Council Health Management Team (RHMT/CHMT) capacity and intent to organize, implement, and support quality improvement activities.
 - c) Early markers of institutionalization of QI among demonstration regions and the capacity of the MoHSW to sustain QI activities.

Methodology

Data were collected in the three PQI demonstration regions: Tanga, Morogoro, and Mtwara. Data were collected from multiple stakeholders, using multiple data collection methods:

- National MoHSW/ NACP stakeholders (interviews)
- Implementing partner organization stakeholders (interviews and surveys)
- RHMTs and CHMTs (focus groups and surveys)
- QI team members (focus groups and surveys)

This study also used existing documents as much as possible, as well as the data on clinical indicators from the collaborative databases.

Results

In just over two years, PQI has achieved results in almost all clinical indicators in at least one of the three demonstration regions studied. Quantitative and qualitative results from the study showed high levels of engagement at all levels of PQI, especially among QI teams in health facilities. However, the pace of PQI in covering the remaining regions of Tanzania remains slower than the MoHSW prefers.

Recommendations and Conclusion

Several areas to consider for future applications of the PQI approach are also discussed throughout this document. These recommendations are listed in Table 11 and may be summarized as follows:

- Provide an ongoing forum for implementing partners to share learning across regions with each other, build their QI capacity, and continue to harmonize approaches.
- Consider adaptations/improvements in the collaborative methodology for wider use in Tanzania.
- Increase the QI role of the RHMTs and CHMTs and provide targeted strategies to strengthen their QI skills.
- Improve coordination and logistics to allow implementing partner and CHMT/RHMT staff to spend more time in the field providing assistance to QI teams (at the convenience and request of health facilities).
- Strengthen the use of data for advocacy as well as for improvement activities with teams, CHMTs, and RHMTs.

This report discusses both the strengths and weaknesses of the PQI. These results represent the significant knowledge generated not only by health facilities and their corresponding CHMTs and RHMT, but also by the PQI implementing partners, NACP, and MoHSW in terms of executing a complex quality improvement program. The findings from these three regions provide encouragement that PQI has been effective in building a harmonized QI approach.

I. INTRODUCTION

A. Background of the Partnership for Quality Improvement

In 2007, the USAID Health Care Improvement Project (HCI) was asked by USAID Mission to collaborate with the PharmAccess Foundation, the National AIDS Control Program (NACP) of the Ministry of Health and Social Welfare (MoHSW), and other HIV/AIDS care and treatment partners to build national capacity to improve the quality of services for antiretroviral therapy (ART) and prevention of mother-to-child transmission (PMTCT) services. The partnership between HCI, implemented by University Research Co., LLC (URC), and the PharmAccess Foundation merged complementary skills from each organization; PharmAccess brought experience in assessment, certification, and monitoring and evaluation systems, while HCI/URC provided expertise in collaborative quality improvement methods. A memorandum of understanding between HCI/URC and PharmAccess was signed, providing the two parties with a mandate to engage potential implementing partners in the formation of the Partnership for Quality Improvement (PQI).

The PQI initiative was formed within the context of two important developments. First, the Tanzania Quality Improvement Framework (TQIF), developed at the same time as the PQI, calls for strengthening health management structures across all levels of care (national, regional, district, and facility levels) through a decentralized system. Regional Health Management Teams (RHMTs) are meant to oversee all QI activities in a region and supervise Council Health Management Teams (CHMTs) who, in turn, oversee all QI activities within a district to ensure a continuum of quality care. To date, there are 25 RHMTs and over 120 CHMTs in the country. The TQIF also outlines the necessary steps to improve and institutionalize quality of health care in the country by efficiently utilizing the scarce resources available. Secondly, the regionalization of implementing partners (IP) was put into effect in 2006 to improve accountability and program performance. Earlier, up to five implementing partners could be working in one health facility while other facilities in that region could remain unsupported. Regionalization meant that each implementing partner was assigned to work with health facilities in a specific area. While this regionalization provided more uniform support across a region, it also necessitated a harmonized and consistent approach to QI to avoid the confusion of developing different approaches across facilities and regions in the country.

Thus, in responding to the request of the USAID mission, the URC/PharmAccess partnership played a key role in mobilizing stakeholders (government and IP across all levels), in providing technical leadership, and in coordinating the program to develop a harmonized QI approach. Currently as a result of PQI, Improvement Collaboratives have been established in Tanga, Morogoro, Mtwara and Lindi in partnership with implementing partners working in those regions (refer to Figure I and Table I). To support these improvement collaboratives and future QI programs, a QI guideline for HIV/AIDS services has been finalized and a standardized QI training manual to assist in the roll-out is under development.

Figure I: Coverage of the PQI in 2010



B. Objectives of the Study

In order to put the objectives of the study in context, the design of the PQI is described briefly. PQI began with a demonstration phase in Tanga in May, 2008 with AIDS Relief and the corresponding RHMT and CHMTs in Tanga Region. The demonstration phase then continued with QI work in Morogoro through FHI/TUNAJALI beginning in February 2009, and then in June 2009 expanded to Mtwara, in partnership with the Clinton Health Access Foundation (CHAI) and Elizabeth Glaser Pediatric AIDS Foundation (EGPAF). The recent initiation of QI activities in Lindi through the Clinton Foundation and EGPAF marks the first region to undertake the spread as planned in the design.

Table 1: Partners, focus areas, and health facilities participating in the PQI, 2010

Date Started; Stage in Collaborative		Implementing partners	Focus area(s)	Number participating in the PQI	Participation in study (health facilities)
TANGA	-Launched May 2008 - Improvement Collaborative completed with 3 LS, 4 coaching visits	AIDS Relief & GTZ*	ART; PMTCT	5 RHMT members 24 CHMT members	1/1 Regional Hospital 5/5 District Hospitals 2/2 Health Centers
MOROGORO	-Launched February 2009: PMTCT: 2 LS, 3 coaching visits ART: 2 LS, 3 coaching visits MVC: 1 LS, 0 coaching	FHI/TUNAJALI MoHSW Department of Social Welfare, PACT	ART; PMTCT MVC	7 RHMT members 18 CHMT members	1/1 Regional Hospital 3/6 District Hospitals 4/5 Health Centers 3 "Other" health Facilities
MTWARA	-Launched in June 2009	Clinton Foundation (CHAI), EGPAF and GTZ*	ART; PMTCT; HR	4 RHMT members 12 CHMT members	1/1 Regional hospital 4/4 District hospitals 4 Health Centers
LINDI	-Launched in November 2009 First region where activities are funded by IP	CHAI, EGPAF and GTZ*	ART; PMTCT	5 RHMT members 23 CHMT members	Not included in study; Program active in: 1 Regional hospital 4 District hospitals 5 Health centers

*GTZ is not a PEPFAR implementing partner but is actively involved in QI activities related to infrastructure improvement and capacity building in these regions.

Now the next step is to consider how QI lessons and better care practices emerging from the demonstration phase can be spread to reach other regions of Tanzania using a harmonized approach to QI. While PQI has made impressive progress in the current four regions, Tanzania is a huge country; the challenge is to come up with an efficient approach for reaching out to more health facilities in the remaining regions. Therefore, it is important at this juncture to understand how well this approach has worked in these four regions as well as to consider how it can be improved, modified, and strengthened for spread to additional regions in Tanzania.

To address these questions, this evaluation explored the following aspects of the PQI:

- I. Describe how the PQI evolved, comparing the planned design with how things evolved in reality across regions, by studying:
 - a) Modifications that have been made to the original design of the PQI

- b) How learning (about initiating, implementing, supporting, and institutionalizing QI) has spread among implementing partners operating in different regions and explore if there are further opportunities to build upon IP knowledge/experience.
2. Assess the effectiveness of PQI, by exploring:
 - a) Results achieved by health facilities participating in the regional improvement collaboratives in terms of improving the quality of care and patient outcomes
 - b) Implementing partner (NGO, RHMT, CHMT) capacity and intent to organize, implement, and support quality improvement activities
 - c) Early markers of institutionalization of QI among demonstration regions and the capacity of the MoHSW to sustain QI activities.
 3. Develop recommendations on how the PQI strategy could be further modified to:
 - a) Optimize the spread of learning between implementing partners and RHMTs operating in different regions
 - b) Reduce obstacles to spreading the PQI methodology to other regions in Tanzania.

II. METHODOLOGY

A. Data Collection Instruments and Sampling

The PQI demonstration regions (Tanga, Morogoro, and Mtwara) were selected for this study as they have been participating in the program for more than six months. On the other hand, Lindi, the first spread region, was excluded from this evaluation as the program was relatively new and therefore could not provide useful comparability.

In Tanga region, eight health facilities participating in the collaborative were included in the study sample: one regional hospital, five district hospitals, and two health centers. In Morogoro, the study sample included 11 facilities: one regional hospital, three district hospitals, four health centers, and three “other” hospitals. In Mtwara, eight facilities participated in the study: one regional hospital, four district hospitals, and four health centers.

Data collection instruments (listed in Table 2 and included in Appendix 1) were drafted in English and then translated into Swahili. It was determined that data collection from the QI teams, CHMT, and RHMT members would be integrated into program activities and carried out primarily by PQI staff, consisting of regional collaborative managers from URC as well as staff from implementing partner organizations. While this risked introducing bias into the data, it also allowed for more extensive data collection within available resources. The research team decided that since this was more of a self-assessment than a formal program evaluation, this trade-off was acceptable. Data collection with national stakeholders and IPs was carried out by US-based researchers during one visit to Tanzania, supplemented by telephone and e-mail communications.

Table 2: Data collection tools and sampling

Tool	Type of data collection	Sample
Tool 1A: Survey for QI teams	To assess engagement in quality improvement and identify early markers of institutionalization	Total number of QI team members surveyed: Tanga 62; Morogoro: 52; Mtwara: 39
Tool 1B: Focus group guide for QI teams	Focus group exploring experiences gained by participating in the improvement collaborative and additional support needs	Focus groups conducted: Tanga: 8; Morogoro: 8; Mtwara: 2
Tools 2A and 2B: CHMT Survey (2A) and RHMT members (2B)	Survey and early markers of institutionalization and sustainability	CHMT members surveyed: Tanga: 27; Morogoro: 15; Mtwara: 18 RHMT members surveyed: Tanga: 3; Morogoro: 5; Mtwara: 3
Tool 2C: Focus group guide for CHMT and RHMT members	Focus group to explore opinions about participating in QI at a regional level and to identify barriers to sustainability and spread.	CHMT focus groups conducted: Tanga: 5; Morogoro: 3; Mtwara: 1 RHMT focus groups conducted: Tanga: 3; Morogoro: 1; Mtwara: 1
Tool 3A: Survey for IPs	Self-assessment of skills in leading improvement collaboratives and opinions about working with URC/ PharmAccess in implementing the PQI	Implementing partner staff surveyed: 6
Tool 3B: Interview guide for Implementing Partners	Interview to learn about modifications made to the PQI design between regions and to assess intent to spread PQI	Implementing partner staff interviewed: 12
Tool 4: Interview guide for stakeholders at the MoHSW and NACP	Interview to learn about perceptions/opinions on PQI as well as intent to sustain & spread the approach in Tanzania	MoHSW/ NACP Stakeholders interviewed: 3

III. RESULTS OF THE ASSESSMENT

A. The Evolution of the Partnership for Quality Improvement

1. Original design of the PQI

The initial design of PQI stated that HCI and PharmAccess would work alongside an implementing partner organization, the RHMT, and CHMT in one region to develop capacity to execute a QI program; after support from URC and PharmAccess in this first region, the IP organization and NACP were expected to expand QI activities to additional regions with minimal support from URC and PharmAccess. This design is described in the initial concept paper:

“PharmAccess/URC will coordinate a partnership that includes key care and treatment partners which will propose and implement a harmonized QI plan for ART and PMTCT services countrywide that uses uniform sets of QI tools, indicators and a reporting process integrated into the existing Monitoring and Evaluation (M&E) channels.

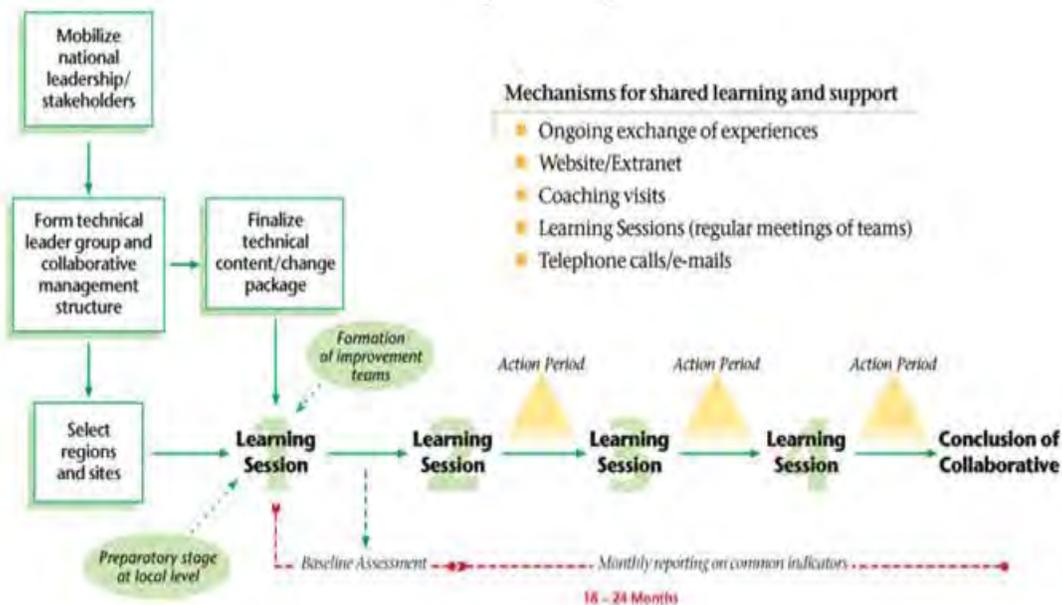
The proposed plan envisions regional teams overseeing QI activities in their respective districts, while district teams oversee QI activities in lower level sites to ensure quality and continuum of care. To achieve this, QI teams will be formed first at regional level, made up of members from regional Care and Treatment Centers (CTCs) and Regional Health Management Teams (RHMTs) (and including CTC and PMTCT/RCH coordinators), in direct collaboration with the Implementing Partner (IP) in the region selected (e.g., ICAP in Coast Region, AIDS Relief in Tanga Region). PharmAccess/URC has started a dialogue on this regional QI model with C&T partners who are operating at regional level. These teams will be trained in QI methods, in particular the Collaborative Approach, assessment methods; supportive supervision; mentoring; and M&E. A performance-based system will be used to administer Regional ART/PMTCT quality improvement activities whereby RHMTs and later CHMTs will enter into agreements with PharmAccess/URC on implementing a QI package including the Improvement Collaborative.”

As noted in the text above, *improvement collaboratives* were proposed as the methodology to build QI systems and skills in regions and districts with integrated support from the MoHSW through the NACP. An improvement collaborative is “an organized effort of shared learning by a network of sites (or teams)” which enables participating teams to:

- Adapt to their local situations a known, best practice model of care for a specific priority health problem.
- Achieve significant results in a short period of time (i.e., 12 -18 months), thereby reducing the gap between best and current practice (see Figure 2 below for illustration).
- Scale up the adapted model throughout the organization using a deliberate spread strategy.¹

As with any program, the initial plan is only a best approximation for the design of a program: the real learning and modification occurs during the roll-out process, when interventions are modified to fit what works best during implementation. It is important to document these modifications to the program design so that we can learn from them and incorporate these lessons when we plan spread to other regions of Tanzania or internationally. The next two sections highlight the changes made to the PQI design and discuss adaptations made to collaborative improvement methods.

Figure 2: Collaborative improvement model included in the PQI design



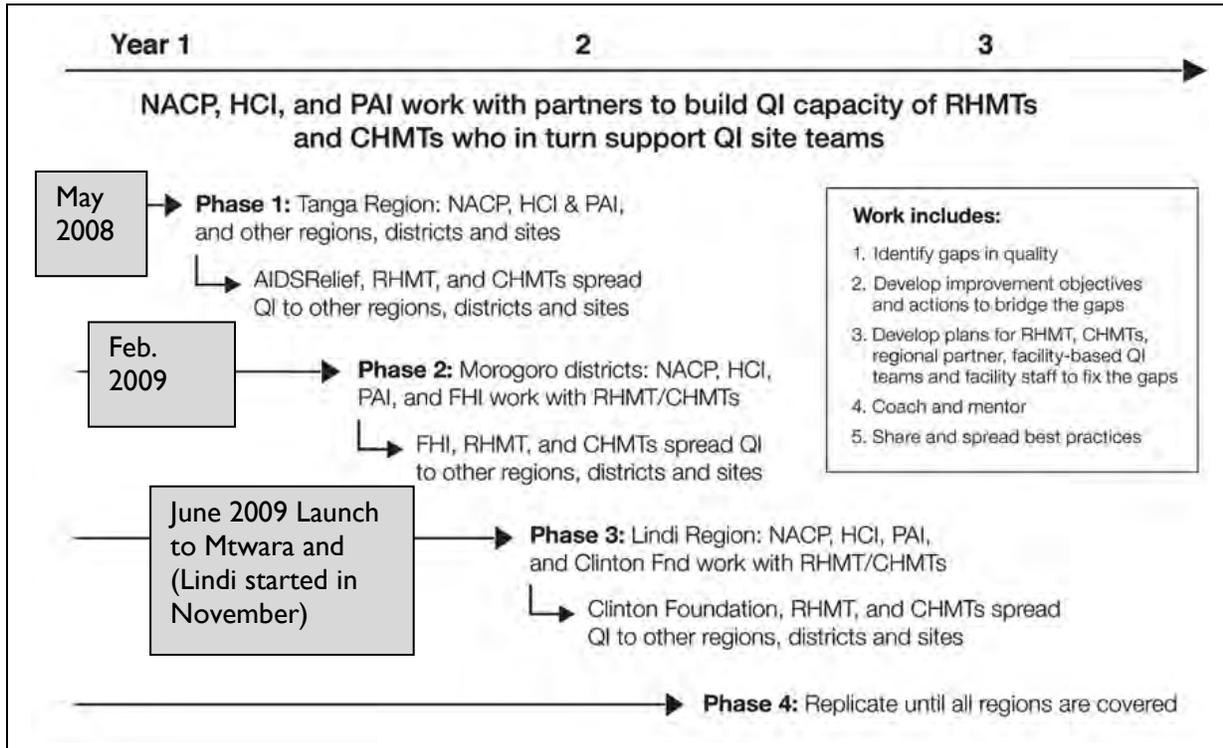
2. Modifications to the original design of the PQI

Figure 3 compares the original design² with how PQI was actually rolled out among regions and implementing partners. The actual timeframe for phasing of QI activities is shown in the grey text boxes on the left hand side of the graphic, while the planned timeframe is shown above in increments of three years. As apparent from this graphic, the geographic coverage of PQI has been carried out as planned except for the recent substitution of Mtwara as the final demonstration region and Lindi as the first spread region.

¹ National ART/PMTCT Quality of Care Improvement Plan. PharmAccess and USAID Health Care Improvement Project. November 2007.

² Tanzania Annual Report (2008). USAID Health Care Improvement Project. Dar es Salaam, Tanzania: URC.

Figure 3: PQI design versus actual implementation



The main modification made to the original implementation plan has been the pace with which PQI has spread to additional regions. During the original design, the NACP requested a brisk pace, while URC and PharmAccess preferred to demonstrate results in one region before continuing work in others. The result was a compromise, as stated by a national stakeholder, “The other partner was NACP and they wanted to go fast. It was a compromise to not just work in Tanga, but also Morogoro and Mtwara.” It was anticipated that PQI would start with Tanga and then expand to support IPs in Morogoro and Lindi within the first year. In reality, the expansion to Morogoro took over a year, with the launch of work in Mtwara and Lindi occurring six months later. In interviews with stakeholders from URC, PharmAccess, and AIDS Relief, the experience acquired during the first year in Tanga consistently surfaced as an important learning period in which partners learned to work together and the methods were refined to the realities of the field. This learning from the first year benefited the expansion of PQI to other regions.

One IP stakeholder compared Tanga to the learning curve that parents undergo with their first child that benefits subsequent children. A URC collaborative manager described the learning experience in Tanga with the following statement: “At the beginning, when we started partnership for QI, we were also not very sure if we would succeed. Is it the right way? How will we do it? How could we convince the partners to work with us? To me, it was learning in Tanga. So we used the gate and the good experiences that we had in Tanga to improve, to start in Morogoro.” Although this year of learning in Tanga before expanding to Morogoro was an unanticipated delay, this period appeared essential in terms of refining the methods as well as for forming a partnership among implementing partners to work together in the future.

A critical factor moving forward into the national expansion of the PQI will not only be the readiness of new implementers to become partners in PQI, but the willingness of existing implementing partners and the NACP to spread the approach to their additional regions with little or no support from URC and PharmAccess. The first spread region, Lindi, is currently being implemented with resources from CHAI,

but with as much technical support from PQI as the demonstration regions. The two regions supported by CHAI—Mtwara and Lindi—are being rolled out simultaneously, thereby making it difficult for CHAI and EGPAF staff to take the lead in Lindi without having completed the experience in one region first.

The implementation of the Tanzania Quality Improvement Framework will also serve as an important catalyst for prompting new relationships with prospective implementing partners as well as encourage existing partners to spread the methods to additional regions using their own resources.

Another important modification to PQI, though not intended, has been the level of engagement of the RHMTs. Although both RHMTs and CHMTs have been heavily involved in PQI, qualitative and quantitative data from this study suggest that it is very challenging to fully engage regional and district (council) teams in the process, as was initially planned. This is due to increased demands on their already tight schedules from both the government and the implementing partner organization, which limit their ability to participate and follow up on all QI activities. The following quote from an IP stakeholder illustrates this issue:

“...The struggle is that we were envisioning that the national level will build capacity at regional level, regional level will build capacity at the district level, district level will build capacity at facility level. But what really happened was that we went directly down to the facility level and now we are trying to come back and build up the district and regional level management to support the facility level. We are still trying to transition through that and build that capacity at the regional level. That is really the challenge.”

3. Modifications to collaborative improvement methods

Although PQI activities were phased according to plan, interviews with stakeholders from IP organizations revealed some modifications to how specific collaborative improvement activities were conducted. Sometimes these modifications were due to conforming to the realities on the ground, while other times the modifications were made based on learning of PQI partners. Some of these modifications include:

- **The design of regional learning sessions.** Learning sessions typically include two or three representatives from each facility’s QI team with the expectation that participants will return to their teams and share the information. Often, at least one member attends all learning sessions to ensure consistency for the team across learning sessions. The PQI collaboratives, however, have extended this number to include a larger number of team members (for example, seven participants per team attended the second learning session in Mtwara). While this allows for greater inclusivity, the increase in the number of participants impacts the cost and logistics of running a learning session. Learning sessions were thought to be too large, making it difficult for facilitators to provide individual attention to QI teams. Venues for such a large number of people are difficult to arrange. Therefore, the PQI team decided to divide learning sessions into two different groups (e.g., group A—half of the districts—for first three days and group B—the other half of districts—for the next three days). This idea was tested in Tanga and Morogoro and has since been replicated in other regions. Although this appears to be a minor modification, this is a significant alteration to the design of a learning session which typically brings together as many health care facilities as possible to enrich the exchange of knowledge between teams. Therefore in weighing the benefits of this change, it is also important to consider how this might impact the opportunity to share among the two different groups and how learning will be synthesized and shared between them.
- **Standardized content and structure for coaching visits.** In the beginning, IPs, RHMTs, and CHMTs would all participate in coaching visits to a health care facility as a group. As the team gained experience, it was decided that they should divide to visit facilities more efficiently and to reduce the number of people visiting a facility at any given time. This is described by an IP stakeholder: *“Together with the partners we’ve developed a structure of the coaching visit to know how to work together with the two partners...so we have an outline, a checklist. We go together and do on-the-job*

training, but we also ask them [the QI team] to give us the same outline when we [the coaches] go there ourselves.” There has been growing concern among IP and other stakeholders (HCI and external) that learning sessions and coaching visits have recently become clouded with HCI program activities, such as the SES evaluation and the PQI and spread studies, which have detracted from the purpose of these visits. This is important to mention as this time with QI teams is limited and important for achieving clinical improvement.

- **Integration of other approaches to QI.** One of the aims of PQI is to provide a uniform approach to quality to reduce confusion from the wide variety of QI models and approaches that could be introduced. One IP described how JICA’s Five S³ program was encompassed into PQI, “People were talking about another strategy implemented by other partners. One being featured was Five S. We realized the concept of Five S needs to be maybe mentioned in the quality improvement guideline which we are developing... thereafter, we integrated it into our strategy. On some occasions, we make presentations on Five S so as to make the participant understand or come up with a common understanding that this is the Five S, but we have the collaborative improvement in our approach, but still if you combine these, you’ll get Total Quality Management.”
- **Adapting the teaching style during learning sessions.** The format of the first learning session in Tanga was frequently described by those interviewed as a lecture format with little adaptation to the Tanzanian context. One of the adaptations frequently reported by IP stakeholders is the modification of this style:

“We used to make a lot of lectures with PowerPoint presentations, so we had some modifications in the way of guiding the program and implementing it. For example, we have now more role plays. It is another modification that gives more time for people to work and probably to discuss among themselves and to share.”

“Most of the sessions and content that we used in Tanga were almost the same as it came from the US. But in Morogoro we developed our own examples—we used examples of what is happening in the CTC in the Morogoro Region of Tanzania. We even involved a case study related to our environment.”
- **Site visits between QI teams.** These site visits appear to have occurred in Morogoro, spearheaded by URC staff during piloting of the ART framework whereby several QI teams arranged a site visit to the Saba Saba Health Center. This sharing was described as a meaningful experiences by a QI team member:

“Another contribution is the field visits by colleagues who have been in the project for much longer, like the CTC In/charge from the Saba Saba and HIV/TB (Coordinator), has been very helpful. The Kingorwila CTC In/Charge also paid a visit to Saba Saba to learn more on how to fill the register.”

These changes to the functioning of PQI are important to document along the way so that they can be replicated and further innovated upon in future spread regions.

4. Establishing a partnership between implementing partners

Interviews suggested that the general difficulty to working in a partnership is the amount of time required in the beginning as partners negotiate and learn about each other. There are several levels of partnership involved in PQI between:

- HCI/URC, PharmAccess, and the NACP to lead the effort nationally,
- HCI/URC, PharmAccess, and the NACP and the implementing partners, and
- Implementating partners and the RHMTs.

³ Five S is a QI method that promotes workplace order with five steps: sort, straighten, shine, standardize, and sustain.

As the relationship advances, however, effective partnerships between organizations allow for greater agility and mobilization of resources (human and material). These benefits are apparent from the following quotes by stakeholders from PharmAccess and AIDS Relief with regards to the partnerships:

“In the learning session in Mtwara, we had planned to have two people go there from PharmAccess, but then NACP postponed it, and now the date is set similar to the dates of the learning sessions [for another region]. So we can send only one person, but URC can send a second. It gives us flexibility. And sometimes they have other activities planned, so there is flexibility.”

“When URC and PharmAccess came, they were able to step on the gas a bit faster, the sites were going too slowly for us. With URC coming in, we were able to move a bit faster. I think it’s because URC centers on QI. Compared to other IPs, I would confidently say in terms of continuous quality improvement, we are ahead in terms of implementation in other countries in QI; we saw that the ideologies were the same as what we have so we were ready from the get-go to start working with them. It was such an added value—the roles of working with RHMT/CHMT—other IPs were talking about involving them, but in terms of specific roles, it was a pioneer effort. Doing the learning session, it was something we had in mind, but had not done it. Even the specific QI terms, we had not executed on it, but just had in our mind. It helped us move toward meeting some of our QI goals.”

The success of PQI not only hinges on the effectiveness of the methodology, but also the ability and willingness of core partners (NACP, URC, and PharmAccess) to work together seamlessly and in turn engage IP organizations. If the relationships do not work well at these partnership levels, it will be more difficult to achieve results at regional and facility levels. URC and PharmAccess developed a strong working relationship, as demonstrated by the following statement by a PharmAccess stakeholder:

“I think it is between these two organizations—I don’t know if it can be duplicated. How we have gelled together and studied each other, I don’t know if it can be duplicated elsewhere.... Sometimes when we were in the region we complement each other, we say this cannot be done in another organization. We are focusing on Tanzania only, the work we are doing is not for us, it is for the good of Tanzanian people. So I think all of the members of the team now are looking at the greater picture, the common goal, not themselves. And also it is because all the team is learning everything.”

As stated by this stakeholder, the question is whether this type of working relationship can be replicated with additional organizations. This poses a challenge to URC, PharmAccess, and the NACP to work to approach prospective implementing partners with a base of authority from the MoHSW to standardize QI approaches, but in a non-threatening way that builds trust and allows for some philosophical differences. The biggest challenge appears to be in initiating these partnerships, due to differing approaches to quality and fear over attribution of results. PQI national stakeholder commented:

“In my own opinion, we have not explored the readiness of other implementing partners for expansion. Of course, working with partners is not easy. Maybe the partner opening the door for you is the most difficult step—the IP opening the door and inviting you to come in, this is the most difficult thing to do. So far the Clinton Foundation has been the only partner to do so... To achieve is to not threaten the position of the partner. They are worried that all credits go to you.”

“Initially not every partner is happy that you come and introduce the QI work because some partners have the QI strategy already, which they believe as existing partners in a particular region they feel comfortable to do it.... So you have to sensitize them, you have to at least make them understand why you need to be one and work as a team towards one common goal. Not everyone will be happy. You can invite them and you can start working together but on the way you may find that someone is not participating in all of the forums which you are organizing.”

One factor consistently mentioned by implementing partner respondents as important in mitigating this initial challenge is establishing a common goal among IPs. Almost all IP stakeholders interviewed felt optimistic that the national QI guideline for HIV/AIDS services about to be published would be a strong

push towards establishing common goals among IPs and establish a base of authority for standardizing methods for future partnerships with new organizations and in additional regions.

5. Spread of learning among implementing partners on implementing, supporting, and institutionalizing QI

One of the goals of this study was to learn if and how IPs participating in the PQI are benefiting from each other's experiences working in different regions. To date, this role of transferring knowledge about QI approaches and implementation strategies between IPs has been primarily the responsibility of URC and PharmAccess. As the modifications listed in the previous section suggest, this learning has been occurring and has been transferred between regions. The following quote is another example of how this learning is transferred:

"I think we have been trying—also for us it's been a learning process, modifying and customizing the materials from what we had in Tanga. When we went to Morogoro, we had the do's and the don'ts, so we knew right away in Morogoro how we should start. We start in areas of improvement with three or four indicators cutting across all of the four regions to see changes in the process of care. When people say 'This is the problem we have' then we can give them an example, 'A team in Tanga tried this, could you try it?'. Maybe it's possible or not possible depending on the customs and beliefs [in that region]. As facilitators we've tried to take what we've seen from one region to the next."

If PQI continues expansion, however, in-depth knowledge of the learning about QI in each region may not be feasible for URC and PharmAccess, thereby necessitating a more formalized system. As described by a national stakeholder,

"URC is a catalyst. After initiation of the program, it is the role of the IP to roll out the program in the rest of the region and additional regions. URC keeps in touch and provides technical support as needed, but is not as hands-on; URC is released to work with other partners."

IP stakeholders reported learning their QI skills through hands-on experience and coaching. Although this was reported as a valued way of learning, there was a resounding suggestion among IPs to create a forum for learning about QI and sharing experiences among partners. The following quotes from stakeholders representing different IP organizations reflect this suggestion:

"You prepare the PowerPoint and then request me to go facilitate this session. I've never even come across this PowerPoint. There is no orientation on the topic and content, then you allocate the task. Granted the PowerPoint presentation is already prepared, you can lead the process. So, the art of facilitation. Someone can have that art, but for the content, it might not work. My interpretation may not be the same—a different interpretation. So, to harmonize that maybe stronger orientation is needed to understand the content and to come up with common understanding. We get the feedback 'The facilitators are not well organized. There are different views on this area.' Participants view that. Maybe only one person has the observation, which is the right observation maybe for improvement."

"Sometimes I'm the facilitator. I might have to go to one region, but someone needs to go to another region. But one person can coordinate the facilitation, so they need to have common orientation so whatever is taught in Iringa or Mtwara is the same as what is taught here. Just like priests in the Catholic Church who were talking in Tanzania today, you can hear the same tone from the priest talking in England and everywhere. They are singing the same tune and dancing the same."

"It would be helpful to have a training on the learning collaborative principles, approach, and how the process is implemented. Maybe they've done that but I haven't had a chance to do this. For a partner like us that has been doing QI for a while, it would be difficult to say 'we need to go to a training to learn QI.' But it's important that the partners are saying the same thing and have a full understanding of what the MoHSW is expecting from the partners in the facilities."

This need to improve harmonization among partners was also raised during the focus group with the QI team members from Mtwara:

“The only problem is that our facilitators differ in terms of objectives, strategies, and outlook. One facilitator tells you this is the way to address the objectives while another one tells you to do it the other way round. This is confusing We request that they have one stand. Otherwise the work becomes difficult, since every day we face criticisms. Everyone wants things done his/her way. During data collection, it is not easy to tell whether there is improvement or not. You get a picture which is not clear. This can be discouraging, though later you come to realize that this is due to the different stands of the facilitators.”

One IP stakeholder suggested that holding quarterly QI stakeholder meetings would not only improve harmonization of QI, but also improve planning of activities, strengthen MoHSW leadership, strengthen regional guidance on supporting QI, and increase transparency about future activities and plans.

B. Effectiveness of PQI in Terms of Clinical Results Achieved by Improvement Collaboratives

One of the most important measures of the PQI's success is whether or not it resulted in improved health outcomes for patients seen in health care facilities participating in the program. There are several key indicators which have been tracked as part of the collaborative in all the regions, and other indicators that are specific to a region. The collaborative databases were analyzed utilizing the rules to detect trends⁴ and shifts⁵ which would indicate with 95% certainty that a significant improvement had occurred.⁶

It is important to preface this section with several limitations in terms of drawing conclusions from the data from the collaborative databases:

- Data in the collaborative databases were presumed to be accurate and were not audited or verified by the evaluation team⁷; verification of data has occurred, however, through Mtwara and Morogoro where a data management checklist is used on a sample of patients' data to verify recording and entry into computer databases. Coaches also are responsible for verifying data during regular coaching visits.
- This study did not examine whether any factors outside of the PQI collaborative could have contributed to improvements.
- Finally, the number of sites reporting on each indicator varied from month to month in the collaborative databases; the number of sites reporting on indicators across all regions nearly doubled over the period of implementation of the three collaboratives, which creates a significant fluctuation in the denominator which sometimes exceeds 25%. This fluctuation in sites reporting

⁴ A trend is consecutive movement in one direction, up or down. The minimum number of ascending/descending points depends on the number of data points in the data set. If two consecutive data points are equal, only one is counted towards the trend.

⁵ A shift is at least six points consistently above or below the median. Points falling on the median are not counted.

⁶ For further discussion of analysis of improvement data in time series charts, see Zeribi KA and Franco LM. 2010. Guidance for Analyzing Quality Improvement Data Using Time Series Charts. Bethesda, MD. Published by the USAID Health Care Improvement Project. Bethesda, MD: URC. Available at: <http://www.hciproject.org/node/1644>.

⁷ A study conducted by HCI on the sequential validity of self-assessment data in Mtwara found that over the course of 10 months, validity either improved or started and remained high for most self-assessment activities. Moreover, no statistically significant difference was seen between the data values recorded by QI teams and those of expert reviewers. See Kinoti et al. 2010. Sequential Validity of Quality Improvement Team Self-assessments in Tanzania. *Research and Evaluation Report*. Published by the USAID Health Care Improvement Project, Bethesda, MD: URC. Available at: <http://www.hciproject.org/node/2499>.

reflects the reality of the difficulty of collecting consistent data each month across all health care facilities participating in collaboratives. This fluctuation, however, does make it difficult to draw firm conclusions and comparisons across months.

Section III.B.1 provides an overview of the clinical indicators where collaborative-level improvement has been achieved in at least one region; section III.B.2 highlights those indicators where collaborative-level improvement has not yet been achieved, but where individual health care facilities have achieved results.

1. Indicators for which collaborative-level improvements occurred

Collaborative databases from Tanga, Morogoro, and Mtwara show promising improvements at the collaborative level (pooled data which includes all health care facilities participating in the collaborative). This is especially interesting as Mtwara, the newest region to join the PQI, has achieved collaborative-level results on many indicators in a shorter amount of time. Table 3 summarizes results achieved on the collaborative indicators across the three regions; graphs are included in Appendix 2 for indicators in which collaborative-level improvement has been achieved.

Table 3: Collaborative-level results for key indicators

Indicator	Tanga	Morogoro	Mtwara
<i>Daily prophylaxis for children under 18 months</i>	Collaborative level trend (Jan-Oct 2009) plus upward shift	Upward collaborative level shift (Oct 2009 – July 2010)	Collaborative level trend January – October 2009, but not sustained
<i>Enrollment of HIV+ pregnant women into CTC</i>	Upward collaborative level shift	No	Problematic reporting with values exceeding 100%
<i>HIV exposed infants receiving ARV per month</i>	Upward collaborative level shift (May 2009 – March 2010)	N/A	N/A
<i>HIV+ patients on ART LTFU per month</i>	Downward collaborative level shift (sustained since Jan 2009)	Downward collaborative level shift (Jan – Nov 2009), but not sustained after Dec 2009	No, reported difficulty in consistency of sites reporting
<i>CD4 testing every six months for HIV+ patients</i>	Upward collaborative level shift (April – Nov 2009), but not sustained with one data value below median	No	Upward collaborative level shift (Nov 2009 – April 2010)
<i>Assessment for active TB at every visit</i>	No	No	Upward collaborative Level shift since Nov 2009

Daily prophylaxis for HIV-exposed children (under 18 months)

The indicator in which a positive trend was observed across all three regions is the percent of HIV-exposed children under 18 months of age receiving daily Cotrimoxazole prophylaxis per month. The PQI collaborative in Tanga showed significant improvement with a trend of consecutively increasing percentages (January – October 2009) as well as a shift from a first median of 25% to a second median of 50%. Monthly results have consistently remained above this new median of 50% and with the exception of a couple of months, have continued to increase. In this analysis, however, it is important to note that the denominator is an estimate of the HIV-exposed children born the previous 12 months. In Tanga, the denominator varies until February 2009 when the denominator becomes a steady estimate.

A significant upward shift also occurred among facilities participating in the Morogoro collaborative. While overall levels remain low with a median of 8%, the shift starts in October 2009 and is sustained through July 2010; the number of sites reporting gradually doubled, so this does introduce variability in the denominator size. The collaborative manager for Morogoro reported that the availability of Cotrimoxazole was a significant factor affecting the results on this indicator. In health care facilities

participating in the PQI collaborative in Mtwara, there was a steady increase between January and October of 2009; the percentage falls below the median in November 2009, but this was also a month with fewer reporting sites and a lower denominator. When sites not consistently reporting were removed from the analysis, however, the plot line remained similar with an upward trend followed by a sharp drop and another increase. This would indicate that an early trend towards improvement did occur, but something occurred after November 2009 to interrupt this improvement.

“...Enrollment of these exposed infants, who can test positive, has been increased. And also the HIV- exposed infant who were put on Cotrimoxazole also increased you see. So at the end, the product is visible and those will say, ‘Oh yes, we were losing a lot of these children, and now we have them! We can follow up’.”
–NACP Stakeholder

The provision of multiple access points for Cotrimoxazole is one of the key changes believed to have contributed to these results. This is described by an IP stakeholder:

“...Sometimes they [clients] find that there is only one area where Cotrimoxazole is provided. So another change is to ensure that Cotrimoxazole can be provided at the RCH, CTC, and Pharmacy because the mother is coming there for an ARV uptake so to reduce the burden of making repeated visits from one unit to another. So going to one unit, they [clients] get both the services needed for the child and for the mother.”

Enrollment of HIV-positive pregnant women into CTC

Tanga was the only region to achieve collaborative-level improvement in increasing the enrollment of HIV-positive pregnant women into Care and Treatment Centers. The collaborative database shows an upward shift above the median (82%) starting in August 2009 to a higher percent of HIV-positive pregnant women consistently enrolled in CTC. These results could be biased by the number of sites reporting, which vary between six and eight until July 2009.

While no trends or shifts have yet been shown at the facility level for this indicator in Morogoro, some facilities have begun to show promising improvements (Turiani District Hospital, Ngerengere Health Center, Mazimbu Hospital, and Kilongolwira Health Center). In Mtwara, reporting for this indicator seems to be problematic, with values frequently reported over 100%.

Percent of HIV-exposed infants receiving ARV prophylaxis per month

This indicator was only tracked in Tanga with a long shift occurring between May 2009 and March 2010, with 98-100% of HIV-exposed infants receiving ARV prophylaxis in Tanga.

Reducing the percent of HIV-positive patients on ART lost to follow-up

Tanga has shown promising collaborative-level improvement on this indicator. In Tanga, there has been a shift (since January of 2009) from 8.1% to 1.6% of patients being lost to follow-up (LTFU). The collaborative-level data from Morogoro show initial improvement with a shift towards a reduced LTFU rate; this shift was reversed, however, with an upward shift as of December 2009. It is difficult to draw any collaborative-level conclusions from these data from Morogoro, as the number of sites reporting varies from four, to 10, and then back to four again. Looking at the individual facility level, however, both Ngerengere and Mahenge are showing promising results with reducing the LTFU rate. The collaborative manager for Mtwara also noted that more sites have begun to report on this indicator, making it difficult to compare across months.

CD4 testing every six months for HIV-positive patients

Shifts for this indicator occurred in both Mtwara and Tanga. Tanga’s shift above the median of 38% was sustained for eight months, although some months the values exceeded 100% as patients from previous months returned for CD4 testing when reagents were not available. For Mtwara, the collaborative manager reported that this improvement is due to improvements in counseling, scheduling CD4 test

appointments, adherence to testing timetables, and availability of reagents and testing equipment. This indicator was not tracked in Morogoro. Again, the variation in the number of facilities reporting on both of these indicators each month makes it difficult to draw a definitive conclusion as to whether or not a shift in result has occurred or if it is due to fluctuations in reporting.

Assessment for active tuberculosis at every visit

Mtwara is the only region to have achieved collaborative-level improvements in assessment for active tuberculosis (TB) with a shift sustained since November 2009. The major change reported is the use of a TB assessment tool which is inserted into the client's CTC card. Although collaborative-level results for this indicator have not yet been achieved in Morogoro, many individual health facilities have made great strides in this indicator (Turiani District Hospital, Mahenge District Hospital, Kilosa District Hospital, Morogoro Regional Hospital). In Tanga, data from Handeni District Hospital and Kilindi Health Center show a shift to a higher level of active TB assessment; data from Korogwe District Hospital and Maramba Health Center show that performance on assessment for active TB has been sustained at over 95% for 10 and 12 months, respectively.

2. Indicators for which only facility-level improvements were seen

Data on the clinical improvement of patients on ART are particularly important. An essential goal of PQI is to extend treatment to a larger number of people living with HIV/AIDS, but the value of this treatment is in its effectiveness in improving outcomes for those people. The percent of patients started on treatment (within the last six months) showing clinical improvement was only tracked in Morogoro and Tanga. Neither a trend nor shift was detected in the Morogoro or Tanga collaborative databases for this indicator. In Morogoro, however, the aggregate data show that facilities already had a high level of performance for this indicator, but that performance further improved to a sustained range of 97 to 100% of patients on treatment showing clinical improvement (see Figure 4). The collaborative manager from Morogoro attributed these results to several factors: 1) follow-up by health facilities of the counseling and clinical treatment for patients; 2) direction from RHMT and CHMT to prioritize this indicator; 3) learning between health facilities, especially through site visits; and 4) participation of four of the sites in the ART framework.⁸

Morogoro was the only region to report data comparing patients ever started on ARVs with improvement in patient clinical outcomes. These data are collected as part of the ART Framework and shown in Figure 5. While patients started on ARVs and patients with stable or improved clinical outcomes continue to steadily increase, the gap is widening between the two indicators. This figure shows the inherent challenge that comes with managing an increasing number of patients on ARV treatment (in the case of Morogoro, the number of patients ever started on ARVs has tripled) without necessarily increasing the number of staff. While the graph is helpful in illustrating this gap, it does not take into account other factors that could contribute to a patient's clinical improvement, such as adherence to treatment.

⁸ The ART Framework developed by HCI focuses improvement efforts on the most significant gaps in assuring quality HIV care and treatment. The framework measures and identifies gaps in the quality of care given to patients needing and receiving ART and uses continuous quality improvement methods to develop and test changes to reduce the gaps. The framework focuses on three indicators: 1) coverage, which measures the proportion of patients who are started on ART of those who require treatment; 2) retention, which measures the proportion of patients who remain on ART of those who were started on it; and 3) clinical outcomes, measuring the proportion of patients with healthy outcomes from those who ever started on ART. For more discussion of the gap analysis framework, see Dick et al. 2010. Implementing a Gap Analysis Framework to Improve Quality of Care for Your Patients. Case Study: Improving Care for Patients on ART. Published by the USAID Health Care Improvement Project. Bethesda, MD: URC. Available at: <http://www.hciproject.org/node/1504>.

Figure 4: Patients started on ART showing clinical improvement in Morogoro

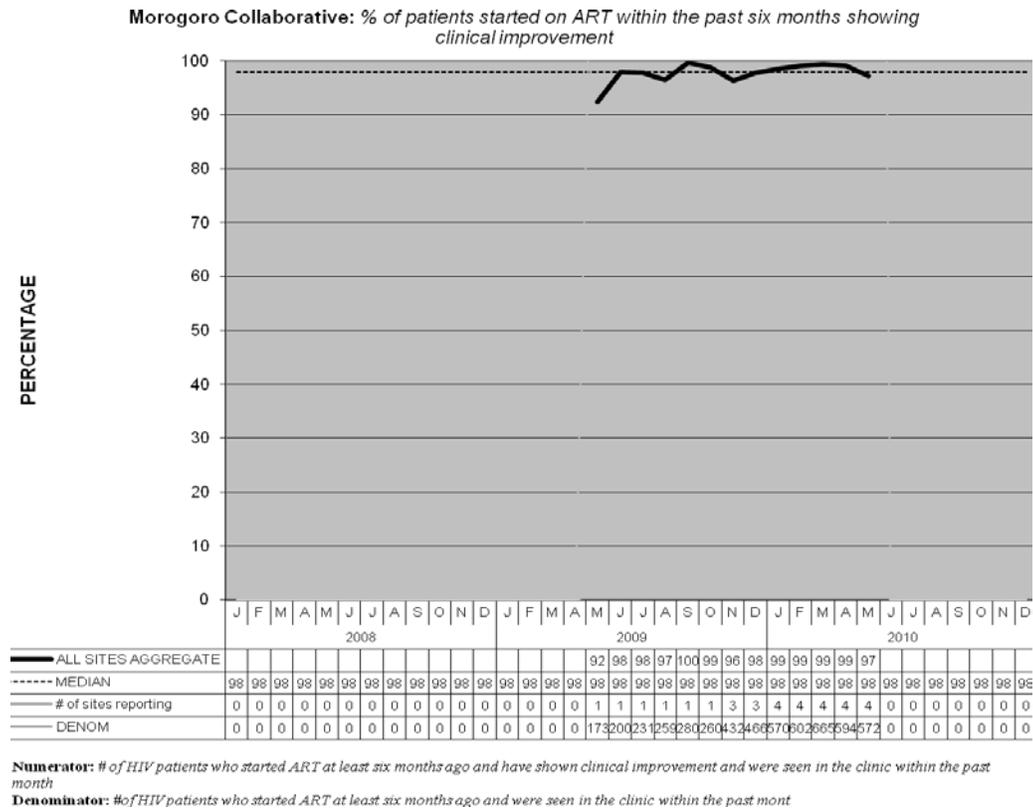
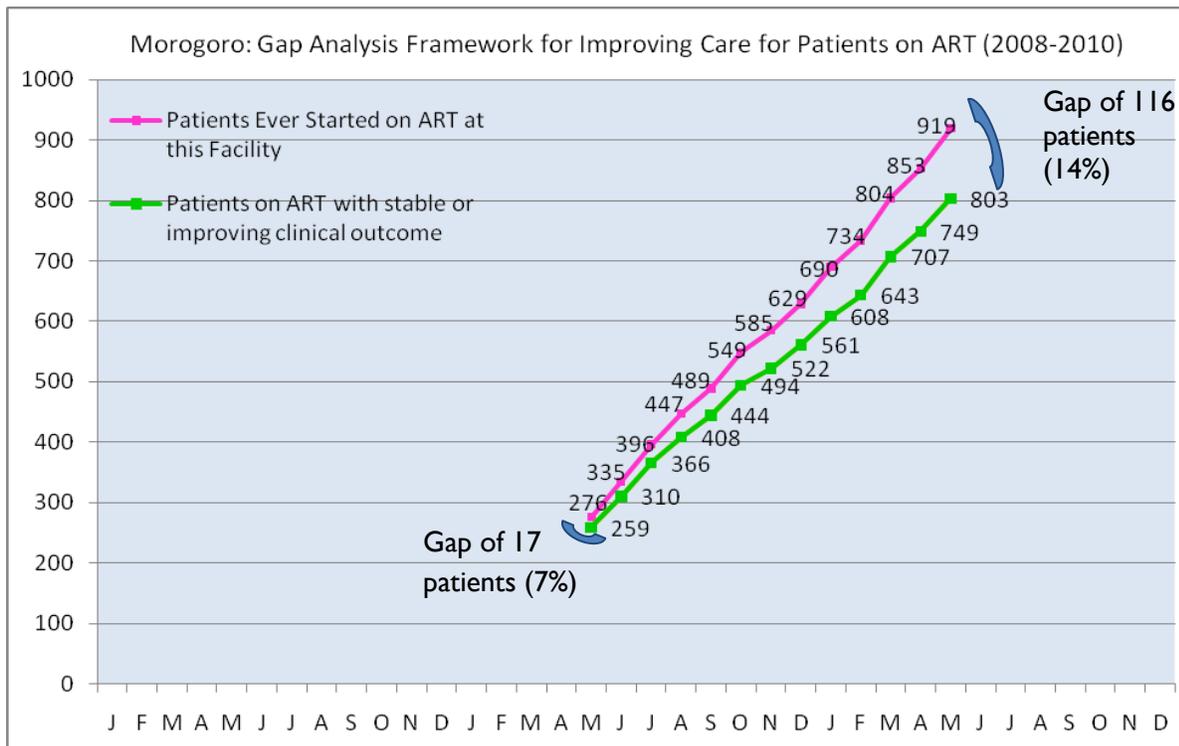


Figure 5: ART Framework gap analysis for Morogoro



C. Capacity and Intent to Organize, Implement, and Support QI

1. Quality Improvement Teams capacity for QI

QI team members filled out anonymous self-assessments of their competencies to carry out key quality improvement tasks. First, respondents were asked if they carry out the task in question regularly, or have done it before; secondly, respondents were asked if they can (or could) do that task without any difficulty or with difficulty. The percent of respondents that have completed all tasks varies by region (see Table 4), from 24% in Tanga to 21% in Morogoro and 15% in Mtwara.

Table 4: QI team members that self-reported ability to perform all QI tasks

	% of respondents who have performed ALL QI tasks	% of respondents that could perform (or have performed) ALL QI tasks without difficulty
Tanga (n=62)	24%	15%
Morogoro (n=52)	21%	8%
Mtwara (n=39)	15%	8%

Results for specific tasks listed in these self-assessments are shown in Table 5 for each region. Tasks most frequently reported across the three regions as having been performed include: 1) de-briefing QI teams on work done in a learning session, 2) writing QI team meeting minutes, and 3) documenting implemented changes. These three tasks are listed again as some of the tasks completed with the least difficulty. In Morogoro and Mtwara, the tasks least performed were preparing for learning sessions, which is understandable considering learning sessions typically occur two to three times a year, so not all QI team members would have participated. In Tanga, the least performed task was drawing time series charts. In general, the tasks around collecting and analyzing QI data were reported as not performed and also tended to score as a skill that could be performed with difficulty. Other skills that could be performed with difficulty included: developing a QI work plan (Morogoro, Tanga) and drawing and analyzing a process analysis (all regions). Difficulty with developing process analyses emerged consistently in focus groups across the three regions.

“I can easily explain to the visitors the situation of the facility by referring to the data and graph which I have, within a short time.”
 –QI team member in Morogoro

“Without data you cannot evaluate your performance. After being trained, I trained my fellow staff on the importance of data collection. Now we are able to know whether we have improved or not.”
 --QI team member, Mtwara

The tasks most often reported as having been completed also are the tasks that are reported as carried out without difficulty. This relationship between the ease and frequency with which tasks are carried out shows the importance of regular practice for critical QI tasks—first with coaching and then independently—to ensure that QI team members gain the experience and confidence needed to do the tasks alone without difficulty. One MoHSW stakeholder commented that although QI methods are new to some people, the concepts are generally intuitive:

“QI in health care settings is a new concept. So first you need to understand the concept itself and then understand that it means nothing new from something I used to do. But, how can I do [QI] in a more scientific and documentable way to have results, knowing the baseline and then going through to track the levels of operation? Now after a period of time, [we look at] ‘how far I have moved?’, so you can measure their performance. Everyone grasps the concept and thinks ‘Oh, quality improvement is a good thing to practice.’”

Table 5: QI team member competencies for QI tasks

QI Team Member Core Competency Tanga (T) n = 62 Morogoro (Mor) n = 52 Mtwara (Mtw) n = 39	Respondents who either perform a given task or have performed it before			Respondents who express they have the ability to perform a given task without any difficulties			Respondents who express that they have the ability to perform a given task, but with difficulties		
	T	Mor	Mtw	T	Mor	Mtw	T	Mor	Mtw
QI Skill Area: Process Analysis and PDSA Cycles									
Draw and analyze a process analysis	66%	71%	62%	44%	40%	41%	47%	54%	46%
Carry out a PDSA cycle	77%	64%	87%	57%	31%	54%	40%	62%	44%
Document changes that have been implemented	82%	77%	72%	76%	58%	74%	24%	40%	21%
QI Skill Area: Team Work and Planning									
Develop a work plan for the QI team	81%	65%	69%	45%	31%	51%	53%	64%	39%
Lead a QI team meeting	69%	52%	51%	55%	39%	49%	42%	50%	46%
Prepare for a learning session	48%	33%	21%	40%	21%	28%	50%	64%	44%
De-brief QI team on work done at a learning session	92%	90%	87%	65%	67%	82%	36%	33%	10%
Write QI team meeting minutes	86%	71%	59%	69%	54%	77%	31%	44%	18%
QI Skill Area: Collecting and Analyzing Data for Improvement									
Calculate indicator values	73%	52%	59%	52%	29%	44%	42%	64%	49%
Draw graphs for a time series chart	48%	54%	54%	42%	40%	56%	47%	56%	28%
Write changes and other events on the graph	69%	65%	64%	50%	39%	62%	44%	58%	31%
Interpret the chart	61%	62%	59%	52%	37%	54%	40%	60%	33%

One IP stakeholder described how coaching visits are valuable to building the skills of QI team members:

“It’s difficult, it’s challenging, but it’s also rewarding at the end of the time when you go and find that people are really waiting and ready and want to learn. Then you realize that is what we were really meant to do. Sometimes at the learning session, people are not getting enough time to have one-on-one conversations with our facilitators, so the coaching visit is really the time to sit down with them and really go through their books, registers, all the questions that they have. It’s a closer visit and a learning experience for both of us, to learn from them what they really need...”

The value of coaching visits was mirrored in the qualitative data from QI team members as well as from CHMT and RHMT members. Said one RHMT member in Morogoro:

Coaching is better than supportive supervision. In supportive supervision, you assess a person by using a check list in which you cannot capture all the issues. It is better to go for coaching.

2. Council Health Management Team capacity for QI

Table 6 summarizes the results from CHMT members' self-assessments of their experience and difficulty in performing key QI tasks. Although CHMTs' self-assessments of their ability to carry out QI skills vary between regions, common tasks were reported as being performed across the three regions. CHMT members across the three regions reported using skills to plan and manage quality (using data about quality for planning and advocating for resources for QI). Secondly, tasks associated with providing support to QI teams were frequently reported as performed across all three regions. The other frequently performed tasks across the three regions included coaching QI teams in collecting and analyzing data as well as sharing and spreading successful ideas and tools between health facilities.

The major difference between regions is the experience and difficulty that CHMT members report associated with certain tasks. Overall, CHMT members from Tanga and Mtwara reported more experience in performing all QI tasks (44% and 47%, respectively) than CHMT members in Morogoro (28%). While the percent of respondents that could carry out all QI tasks without difficulty was 44% in Tanga and 60% in Mtwara, it was 11% in Morogoro. CHMT members from Morogoro commented in a focus group that they received less QI training than QI team members, which makes it difficult to oversee and coach QI activities.

A focus group in Mtwara among CHMT and RHMT members discussed the value of building coaching skills as opposed to supervision and inspection:

"...Instead of leaving like inspectors to wait for report and statement, the coaches meet with the team, they explain their supervision results, and then they agree to implement what they have discussed...Maybe if one of the indicators had bad results, then a change for improvement is suggested and agreed to be implemented to be reviewed after an agreed time. This is very good instead of a supervisor, who doesn't give any information, he just comes without our knowledge and he comes to do inspection or supervision and when he completes he leaves the place to write a report and brings the report here. But the idea of cooperating with us is good, and it helps to know where there is a problem and how to deal with it....All of us cooperate, every one participates and discusses where there is a problem, so that is why I am very pleased with this activity."

—RHMT/CHMT Focus Group, Mtwara

This also remains consistent when looking at specific tasks reported as previously performed. The tasks reported previously performed tended to be the same tasks that could be completed without difficulty in Tanga and Mtwara. CHMT members from Morogoro, however, reported more difficulties performing those same tasks. For example, training others in QI principles and methods was reported as a frequently performed task among CHMT in all regions (78% Tanga, 72% Morogoro, 73% Mtwara). While 74% of CHMT members in Tanga and 87% in Mtwara reported being able to perform a QI training without difficulty, only 28% of CHMT members from Morogoro claimed being able to do this without difficulty.

It is important to note that this assessment is based on CHMT perceptions of their ability and does not indicate how well CHMT members actually carry out any given task, but provides insight as to whether or not they have done the task before and if they would encounter difficulty with performing the task. Therefore, these figures only indicate that CHMT members in Morogoro would benefit from more hands-on practice to gain confidence and experience in key QI tasks. This consistent discrepancy in Morogoro could also be due to how the study tool was administered in that region.

Collaborative managers from Tanga and Morogoro provided their interpretation of these data:

- **Tanga:** As mentioned in the earlier section of the document, it has been more difficult to engage CHMT members as they are also involved in other programs. This limits their ability to participate in coaching visits and train health care facility staff in QI, putting greater burden on IPs to do so. Also, while data quality has improved among some QI teams, the data are still thought to be inconsistent, which may make it difficult to use them for decision making.

Table 6: CHMT Self-assessment of QI core competencies (median scores)

CHMT Member Core QI Competency Tanga (n = 27) Morogoro (n = 15) Mtwara (n = 18)	% Respondents who either perform a given task or have performed it before			% Respondents who express they have the ability to perform a given task without any difficulties			% Respondents who express that they have the ability to perform a given task, but with some difficulties		
	T	Mor	Mtw	T	Mor	Mtw	T	Mor	Mtw
All QI tasks (combined)	44%	28%	47%	44%	11%	60%	N/A	N/A	N/A
Skill Area: Provide Support in Quality Improvement Methods									
Train others in QI principles and methods	78%	72%	73%	74%	28%	87%	22%	72%	13%
Involve leaders from health facilities in QI	78%	72%	73%	59%	33%	87%	37%	67%	7%
Helping teams resolve obstacles to QI	78%	78%	93%	67%	39%	93%	30%	61%	7%
Skill Area: Coaching Teams to Carry Out QI Activities									
Coach QI teams in collecting and analyzing data	74%	78%	73%	74%	28%	87%	22%	72%	13%
Coach QI teams in developing and testing changes with PDSA cycles	59%	50%	67%	59%	22%	93%	30%	72%	7%
Skill Area: Support the Exchange of Knowledge and Results Between Health Care Facilities									
Coach QI teams in preparing for learning sessions	59%	56%	47%	56%	28%	73%	33%	67%	13%
Share ideas and tools between health facilities	74%	78%	100%	70%	33%	87%	22%	67%	13%
Prepare materials for learning sessions with QI teams	59%	72%	67%	59%	50%	80%	33%	50%	20%
Spread improvement ideas for care, treatment and PMTCT services to other sites in your district	74%	89%	93%	67%	56%	100%	30%	44%	0%
Skill Area: Plan and Manage Quality									
Use data about quality for decision making and planning in your district	82%	78%	87%	78%	56%	87%	15%	44%	13%
Advocate for resources in QI in district budgets	85%	78%	80%	70%	44%	93%	22%	56%	7%

- **Morogoro:** Most CHMT members are performing these key tasks, but with varying amounts of skill and difficulty. The tasks that remain difficult for CHMT members are those related to collecting and analyzing data, developing and testing ideas with PDSA cycles, preparing for learning sessions, and spreading improvement ideas and tools. CHMT members suggested additional QI training during the focus group discussion: *“CHMTs have been getting fewer trainings compared to the actors [health facilities]. As a result, they face difficulties in supervising them during supportive supervision because actors know more than supervisors.”*

3. Regional Health Management Team capacity for QI

The sample sizes for the RHMT self-assessments were small given the small number of stakeholders for coordinating quality at a regional level. While it is difficult to draw firm conclusions with small samples, the data, presented as mean scores in Table 7, are useful in providing an estimate as to where the strengths and weaknesses lie in terms of QI skills at a regional level. Common skills performed across the three regions are: training in quality, recognizing CHMTs and health care facilities for quality, and resolving obstacles to improvement. Another common skill performed is the sharing of tools and ideas between districts within the region.

There is greater variation among regions for tasks performed in relation to direct QI coaching (of CHMTs and QI Teams) and tasks directly related to developing and planning learning sessions. Tanga’s higher score may be a function of the longer time frame of QI activities which has provided more opportunities for RHMT members to perform these key tasks. The same is true for Mtwara as the newest demonstration region for PQI. Morogoro tended to score in the middle. Comparing the three regions together shows a continuum in which experience in the key QI skills is gained over time with direct support from the PQI implementing partners. Inconsistent data collection in Morogoro as compared to the other regions could be one explanation for these differences. Another explanation— inconsistent assignment of RHMT counterparts for PQI—was provided by stakeholders from two different IP organizations:

“In Morogoro there are 18 RHMT members, so the problem is, every time you go you have to start all over with orienting them. In the Tanga experience, we ended up with four people that at least they knew what coaching was. In Morogoro we have this issue that every time you go you get different people and have to start over again.”

“That was a challenge and still is as you have new people come in, and others leaving, then you have to start over again. With the RHMT and CHMT it is pretty difficult. They have many other responsibilities, and so, QI is seen as a parallel program or project coming with its own sources of funding and partners involved. That makes it quite difficult to integrate and help them understand that it is a way of doing work. That is ongoing and maybe we could have the program in which the RHMT are really responsible with their own budget—a lot of work and effort goes into breaking down this feeling.”

Another explanation was a lack of training in QI skills for CHMT and RHMT members. Two IP stakeholders from different organizations commented that one weakness of the program is failure to build sufficient quality improvement skills at the CHMT and RHMT levels.

“Another challenge is obtaining the funds to train teams – currently our approach is to train health facility staff whilst orienting CHMTs and RHMTs on QI issues, without training them.”

“You have three days for a learning session, when do you really sit with the RHMT and train them? It could have been a good thing if we had a prior session to train the RHMT to let them get the hang of it. We don’t have time and can’t go to Morogoro, and you can’t get the RHMT when you want them by yourselves. The same thing is happening in Morogoro, Mtwara, and Lindi.”

Table 7: RHMT self-assessment of QI core competencies (mean scores)

RHMT Member Core QI Competency Tanga (T) n = 3 Morogoro (Mor) n = 5 Mtwara (Mtw) n = 3	Respondents who either perform a given task or have performed it before			Respondents who express they have the ability to perform a given task without any difficulties			Respondents who express that they have the ability to perform a given task, but with difficulties		
	T	Mor	Mtw	T	Mor	Mtw	T	Mor	Mtw
QI Skill Area: Provide Support for QI									
Train others in QI principles and methods	100%	80%	100%	100%	100%	67%	0	0%	33%
Recognize CHMTs and health facilities for QI results	100%	80%	100%	100	100%	100%	0%	0%	0%
Helping teams and CHMTs resolve obstacles to QI	100%	80%	100%	67%	100%	67%	33%	0%	33%
QI Skill Area: Coaching CHMT and QI Teams to Carry Out QI Activities									
Coach CHMTs and health facilities in collecting and analyzing data	100%	80%	33%	100%	100%	67%	0%	0%	33%
Coach QI teams in developing/ testing changes with PDSA cycles	100%	40%	0%	100%	60%	33%	0%	40%	33%
Reviewing monthly reports and providing feedback	100%	60%	67%	100	80%	67%	0%	0%*	33%
Coach QI teams in preparing for learning sessions	100%	80%	67%	100	100%	67%	0%	0%	33%
QI Skill Area: Support Exchange of Knowledge and Results between Facilities and Districts									
Share ideas and tools between districts in your region	100%	80%	100%	67%	100%	67%	33%	0%	33%
Design content for learning sessions	100%	60%	33%	67%	80%	67%	33%	20%	33%
Facilitate learning sessions	100%	80%	33%	100%	100%	67%	0%	0%	33%
Spread improvement ideas for care and treatment and PMTCT services to other sites in your region	100%	80%	67%	67%	100%	67%	33%	0%	33%
QI Skill Area: Plan and Manage Quality									
Use data about quality for decision making and planning in your region	100%	80%	67%	100%	100%	67%	0%	0%	33%
Provide resources for QI in regional budgets	100%	80%	100%	67%	100%	67%	33%	0%	33%

Collaborative managers from each of the regions commented as to whether the self-assessment scores are consistent with their observations. An overarching observation was that according to the current organizational structure in regions, the RHMT do not have authority over the CHMTs. This limits the ability of the RHMT to assist the CHMT in removing obstacles to QI as well as in spreading successful ideas and tools. Specific observations for each region include:

- **Morogoro:** The scores were reported as consistent with observations with the exception of reviewing monthly reports and quality improvement data, which is believed to be done with difficulty.
- **Tanga:** While regional stakeholders have budgeted coaching visits for QI, they are not functioning independently yet as they still request technical support from HCI and PharmAccess staff to carry out activities. They also noted (as in Morogoro) that the RHMT still experiences difficulty in coaching the CHMTs and health facilities in collecting and analyzing data.
- **Mtwara:** There is a discrepancy between the high score for conducting training in QI and providing coaching in PDSA. Also, it was noted that the CHMTs in Mtwara seem to assess themselves as more skilled in QI than the RHMT. The collaborative manager thought this finding is possibly due to their active involvement in learning sessions and coaching visits or due to a discrepancy in data collection.

4. Central Ministry of Health and Social Welfare capacity for QI

Stakeholders at the MoHSW level were not asked to fill out self-assessments of their QI skills; therefore, all data for skills at the central level are qualitative. One stakeholder from the NACP commented that he believes that the MoHSW is ready for expansion to additional regions in Tanzania which will entail supervision support to regional structures from the central MoHSW:

“The NACP, URC and PharmAccess are not working alone. They are the initiator of the idea but during implementation, the regional implementing partner has to be there, the RHMT has to be there. And taking that experience from one region to another, and we think during the national roll-out, we should have enough experience now. Because even in the QI guideline it is clearly explained that the initiative has to be owned by the RHMT, and the implementing partner will be there to support while the national level will have to give back-up supportive supervision.”

Despite willingness to move forward with a national roll-out and the clear structures identified in the TQIF, the actual integration of the central level MoHSW in the QI field work shows some weaknesses, partly due to the limited infrastructure for QI at the national level. The following statement by a senior MoHSW stakeholder illustrates this issue:

“The problem is that due to my nature of work, you know I am extremely busy and going to the regions is not [possible] as often as you people here do. So, I cannot say something which I have not experienced myself there. We were trying to strengthen our unit so that we have quite a number of people so that I can travel and see the other regions. That is my future plan to strengthen the unit so that at least I get time to see for myself how it is.”

Greater hands-on involvement by the national MoHSW in the implementation and oversight of PQI will be necessary to build long-term capacity to expand and sustain this work.

5. Partnering organizations’ capacity for QI

A small sample of six stakeholders from IP organizations (including PharmAccess) filled out self-assessments for their QI skills. Since the sample size was small, it is difficult to draw any comparisons across regions or partners. The survey was helpful overall, however, in providing an anonymous comparison to the qualitative data from the interviews. Respondents agreed (50%) or strongly agreed (50%) that they had the knowledge and skills to meet expectations for supporting QI for their organization. Only one respondent (of six) disagreed with the statement that the IP organizations work

well together, that he/she had sufficient time to work, and that IP organizations have the opportunity to learn from each other.

In terms of QI skills, all IP respondents reported conducting QI trainings, coaching RHMTs and CHMTs in use of data, and spreading successful ideas to additional sites. A QI task performed by almost all (five of the six) respondents, but with greater difficulty, was engaging health care facility leaders in QI. More than half of the respondents reported never having spread the collaborative approach to additional clinical areas nor mobilizing additional partners to spread the successful changes from PQI. This data suggests that while most stakeholders from IP organizations have the technical knowledge and experience to perform the key skills required for PQI, only half report being able to spread the approach to additional organizations and clinical areas without difficulty. This finding is important in considering the pace with which PQI can spread to cover additional parts of Tanzania with an integrated approach to QI.

The programmatic areas most frequently cited as in need of strengthening included:

- **Clarifying and improving the system for collecting and circulating collaborative data:**

“You have to ask someone. I think there is no special guidance on how to go about implementing that. There is a need for a strategy or guide is needed to tell who is to do what, how many times, how to coordinate to who the data is given. The accountability is not well defined.”—IP stakeholder

“The national level should concentrate on streamlining mechanisms/systems to receive regular updates on QI projects along with data. This capacity should be built by national QI partners.”—IP stakeholder

- **Re-designing and planning the coaching system to be more effective and customer-focused (e.g., providing more notice for visits, carrying out coaching at convenient times for health facilities):**

“At times, when the coaches visit the facility, they find shortage of staff, there might no prior information about the visit. At times, the patients feel uneasy when the coaches are given first priority.”—Morogoro QI team member

“Coaches are coming from a bit far. There is a need to train zonal coaches or coaches from nearby areas, so that coaching can be done more frequently, after one or two months, for better performance.”—Morogoro QI team member

“You need enough time to work with the person... You need to see how they fill in the register and the process when they are working and just participate, become part and parcel of their work and see how they go about it. That gives more practical coaching and gives a wider chance for many other people working in that department to learn.”—IP stakeholder

D. Early Markers of Institutionalization of QI

1. Quality improvement teams and institutionalization of QI

Table 8 shows combined team functionality and engagement from the point of view of QI team members. The scores were combined as they were similar across the three regions and reflect high levels of engagement.

Several other observations and early markers of the institutionalization of quality improvement include:

- QI team members consistently disagreed with the statement “people are rewarded when they perform their jobs well as QI team members.” One of the key essential elements to the institutionalization of improvement is a clear organizational value and recognition for quality. This finding indicates that this is an opportunity to improve the growth of a culture of quality by aligning incentives (monetary and/or non-monetary) with quality performance. A QI team member in Morogoro suggested: *“To strengthen participation, I recommend that we have some form of competition*

Table 8: QI team functionality and engagement assessed by QI team members

QI Team Functionality and Engagement Scale: 1 = strongly disagree; 2 = disagree; 3 = neither agree nor disagree; 4 = agree; 5 = strongly agree	Combined Mean Score
Work in the QI team is divided among team members.	4.2
The team takes responsibility for gaps in quality of care.	4.3
When a member is absent, tasks are redistributed.	4.2
All team members are involved in planning and implementing changes.	4.2
Everyone's opinions (regardless of position/ level) are taken into account by the team.	4.5
When a problem is not within the team's control the QI team involves external people to help solve it.	4.3
I believe that what I do as a QI team member is very important.	4.7
Our QI team is well appreciated by all the staff at this health facility, including those in administration.	4.2
I have the knowledge and ability to carry out what others expect of me as a QI team member.	4.3
I have the supplies and equipment needed and the time available to carry out my QI tasks.	3.3
The QI coach (or team leader) recognizes my efforts as a QI team member.	4.3
I have opportunities within the QI team to learn or advance in my profession.	4.2
People are rewarded when they perform their jobs well as QI team members.	2.4
We will sustain the results that we achieve over time.	4.5
Our quality improvement team will continue to function after this program is over.	4.5
It is difficult for me to say something that I think the QI team leader (or coach) would not agree with (<i>note: reversed question</i>)	3.6
Total score	66/80

between facilities practicing QI so that those who excel are rewarded. This could pose some challenge to us.” Another focus group in Mtwara suggested that QI team members receive a certificate upon completing QI training. Although this area received a low score on the survey, in focus groups, QI team members provided many examples of non-monetary rewards, of times that they were recognized for their QI work. One example comes from a QI team member from Tanga:

“Results of QI activities are recognized; stakeholders have given us laboratory equipment, this is one of the indicators that people do recognize our efforts in improving quality of services. Taking an example of data, it has been easy to present anything to the District Medical Officer (DMO). Based on data, the DMO can authorize and we go on with QI activities.”

- QI team members across the three regions agreed with the statement “It is difficult for me to say something that I think the QI team leader (or coach) would not agree with.” This is inconsistent with the other scores which tended to be positive (with the exception of the statement about rewarding quality). Since this was a reverse question, this unusual response raises the concern that team members were circling “agree” and “strongly agree” without reading the statements carefully.

IPs from different organizations provided different points of view about the sustainability of the PQI in health care facilities:

“With the number of staff changes that happen at sites, it is difficult to ensure sustainability, especially if QI is not made an integral part of providing HIV/AIDS care services. Currently it is not, so there is no mandate to convince site staff to conduct QI activities, as compared to M&E activities.”—IP stakeholder

“[in the past] Institutionalization has really been poor at the site level. Getting people to look at their data and understand what they are doing is really a plus. When you go to Tanga you can ask how many patients have you seen—they would say many. Now they are able to quantify what they do, like 50 a day. This is a change in the way people think. It is important for people to look at their data and change that pattern and talk in terms of numbers and quantify what they do. That has really changed and you can observe that when you go to Tanga.

I am confident that results will be sustained. The sites get very excited about their results. QI isn’t anything new, it’s what they have been doing over time, but we are doing it in a structured way. At the site level, they see that whatever they do, it becomes easier to track their patients, understand how many patients are getting CD4s, and reach their target. It is nothing extra from what they are supposed to be doing and they understand this. In a team work approach, now everyone is responsible which makes it more effective.”—IP stakeholder

2. Council and Regional Health Management Teams and institutionalization of QI

Members of the CHMTs and RHMTs in the three regions were asked questions to assess ownership and support for QI in the districts. Although the RHMTs and CHMTs from each region reported similarly, there is enough variation in their responses to list the scores for each region in Tables 9 and 10. Despite being the most recent region, Mtwara scored the highest overall for both CHMT and RHMT engagement. All regions scored very highly on the question “I believe that my role as a QI coach is important,” demonstrating belief in QI methods. Similar to the findings for QI team members, recognition for job performance as a QI coach was among the lowest scores in all regions.

The collaborative managers from the three regions noted that CHMTs often cannot participate in all of the coaching visits and PQI activities due to the other demands on their time. This means that they miss opportunities to develop their QI skills, knowledge, and hands-on experience. Therefore, one conclusion is that more strategies to further develop this important group will provide an opportunity to further strengthen the PQI approach.

Table 9: Mean CHMT scores for engagement in QI

Measure of CHMT Engagement in QI Scale: 1 = strongly disagree; 2 = disagree; 3 = neither agree nor disagree; 4 = agree; 5 = strongly agree	Tanga n=27	Morogoro n=15	Mtwara n=18	Combined Mean n=60
I believe that my role as a QI coach is important.	4.3	4.3	4.8	4.3
I have the knowledge and skills to meet the expectations placed on me to coach QI teams.	4.2	3.5	4.0	4.0
I have the time available to carry out my tasks to support QI in my district.	4.1	3.7	4.1	4.0
I work closely with QI team members and teams to solve problems in my district.	3.9	3.2	4.3	3.8
I am recognized for performing my job well as a QI coach.	3.9	3.3	4.0	3.7
Suggestions by QI team members are taken into account by the CHMT.	3.9	3.7	4.2	3.9
Total Score (of 30)	24.2	21.6	25.1	23.6

Table 10: Mean RHMT scores for engagement in QI

Measure of RHMT Engagement in QI Scale: 1 = strongly disagree; 2 = disagree; 3 = neither agree nor disagree; 4 = agree; 5 = strongly agree	Tanga n=3	Morogoro n=5	Mtwara n=3	Mean Combined n=11
I believe that my role in coordinating quality at a regional level is important.	4.3	4.0	4.7	4.3
I have the knowledge and skills to meet the expectations to support QI in my region.	4.3	4.0	4.3	4.2
I have the time available to carry out my tasks to support QI in my region.	4.0	4.0	4.3	4.1
I work closely with CHMT members to solve problems in my region.	4.3	3.6	4.3	4.0
Suggestions by CHMT are taken into account by the RHMT.	3.7	3.4	4.0	3.6
The QI experiences from my region will be important for influencing national policy on QI	4.7	3.8	4.7	4.3
Suggestions by RHMTs are taken into account by the central MoHSW in developing policy on QI	4.0	4.0	4.3	4.1
Total Score (of 35)	29.3	26.8	30.7	28.6

CHMTs are starting to demonstrate ownership of PQI. For example in Tanga, two districts used CHMT funding to prepare a learning session to train primary health care facilities in QI. This demonstrates skill in conducting a learning session as well as commitment in using their own funds. Other CHMTs also discussed plans to fund QI activities during focus group discussions.

The RHMT engagement scores reflect a strong belief, particularly in Mtwara and Tanga, that their suggestions and the experiences of PQI in their regions will shape national QI policy. This belief and recognition is important as it indicates that PQI is not just a regional project to the RHMTs, but participation in the development of a national program.

Specific threats to institutionalization of QI and sustainability identified by IP stakeholders included:

- High turnover of staff
- A lack of regional leadership by a focal person with the skills and personality to lead QI.
- Quality is still not seen as a mandate, and the roles and responsibilities are not clear at every level.
- A lack of advocacy to the Regional AIDS Control Coordinator for the integration of activities.

Despite these threats to institutionalization of QI, the CHMTs and RHMTs recognize the importance of their ownership of the program. As simply stated in a focus group in Morogoro: *“In order to make it sustainable, we include it in our work plan and own it.”*

3. Central MoHSW and institutionalization of QI

Three stakeholders from the central MoHSW were interviewed about their role in and impressions of the PQI. A recurring theme at the central level MoHSW is the pressure to spread not only to additional regions, but also to additional clinical areas. The pacing of the PQI presents an inherent tension: on one hand, the NACP and MoHSW report wanting a more extensive QI program (both clinically as well as

regionally), but the PQI remains limited to the pace with which implementing partners join the initiative to spread the approach.

“...These clients do not end at outpatient. At some point in time, this person will fall sick and get admitted. How are we taking care of this person in totality? If during his clinic attendances’ as an outpatient at care and treatment or at PMTCT, the service areas are good—and now this person is admitted, how are we disposing him or her? You find now that QI is taking us into the next step...we need to improve quality of service for people living with HIV/AIDS from wherever they are....We don’t have a ward for people living with HIV alone....we find that now we need to plan QI, taking the basic concept of QI and HIV intervention, applying the same and spreading across the hospital or the facility. We need to improve the whole system, although we go step by step.”—NACP stakeholder

“I think the government should be involved to continue with this QI activity because when the donor leaves, this should be a national undertaking.”

--QI team member, Morogoro

*“As a Ministry we are advocating for integration. But here we have a separate [QI] document on HIV testing and counseling...How are we going to integrate it to our mother document? One that deals in HIV counseling and testing lets us have a sole document for HIV testing and counseling, or should we go for the integrated version? It is a dilemma. I am not sure of my opinion but that is one of the challenging areas.”
—MoHSW stakeholder*

As the PQI continues to demonstrate effectiveness, there will be increased interest in expanding to additional clinical areas as well as regions. The collaborative managers from Tanga reported that the PQI could naturally build upon its strengths by involving additional vertical programs such as those for TB, leprosy, family planning, and malaria.

A senior stakeholder from the MoHSW described the comparative advantages of the collaborative QI approach, showing considerable buy-in to the approach:

“...The issue of sharing of information and sharing of basic practices, how you do it, sharing of the problems encountered. To me, this is one of the biggest comparative advantages as compared to the other approaches because it is vividly being stressed that in this approach you need to visit each other, to stick together, to discuss and exchange experiences, problems you have encountered, problems that you find the same, thinking how you can innovate... One of the things about the health improvement collaborative is the focus on data collection and the use of data. Now that is another area collaboratives are better than others. People now know the value of information and its uses. They know the importance of keeping records and data. Those are the issues that the improvement collaborative has contributed a lot.”

4. Partnering organizations and institutionalization of QI

Stakeholders from IP organizations reported a strong belief in the effectiveness of the PQI as well as the importance of the PQI in influencing national QI policy. Interviews with IPs indicated that the methods taught through the PQI are being blended into the partner organization’s QI methods, but not necessarily replicated in additional regions. A stakeholder from FHI stated that additional regions will benefit from the learning from the PQI, but that FHI will use a facility-based improvement model rather than a regional collaborative model which is viewed as too resource-intensive (in terms of cost and staff). Other stakeholders responded:

“Yes definitely, we’ve already started. We have four regions: Manyara, Mara, Mwanza, and Tanga. We haven’t had to do much modification to our approach, but we could do more. We’ve been holding off on doing this until we saw the national level guidelines to make sure that we are standardized with the national level. The learning sessions, though I haven’t actually been to one, I think they are a useful model and I’ve heard positive feedback.”

“We’re trying to incorporate a similar format into our other meetings with the RHMTs to share their quality of care indicators. It’s not done in the same format, but a similar idea of sharing across regions and best practices.”

“More or less the same, it is the rapid improvement method, which is focused on measuring and on site coaching.”

“QI has been a good concept and well received. We’ve tried to use the collaborative approach in some of our regions. In fact, some of the ideologies are similar. We use a lot of HIVQUAL principles and ideas...we were not so used to PDSA, but have been using small tests of change. We share the challenges and see the ways that they can improve. We give them a set of indicators...We’ve done that in Mwanza and in Arusha; after that they go back to the sites, and we have QI specialists who do follow-up. We also have bi-annual meetings, so it’s almost like a learning session.”

These plans suggest that while the philosophy of the QI methods will be spread, the approach will not be spread exactly as it was implemented in the PQI. One of the main reasons cited is that the collaborative approach is considered too costly and time-intensive to be widely replicated. One IP interviewed explicitly listed cost and lack of regional staff as the main reasons that the organization would adopt a hybrid approach to improvement for future work.

IV. CONCLUSIONS AND RECOMMENDATIONS

This report has covered many aspects of the effectiveness of the PQI as well as the opportunities for the initiative to expand coverage to the rest of Tanzania. As discussed in the earlier parts of this document, the PQI has been modified to meet the needs of the three demonstration regions. In replicating the PQI approach, a critical lesson learned is the importance of a learning or incubation period for partners to learn to work together and to refine the QI approach. The first year in Tanga proved to be critical for the success of the PQI, with URC, PharmAccess, the NACP, and regional partners learning to work together. Although this time period delayed expansion to the second region, it proved critical for gaining experience to transfer to additional regions.

A second finding is that partner organizations to date are not spreading the PQI method as originally planned to additional regions. Instead IP organizations are applying a blended approach, which combines certain aspects of the PQI into the partner’s own QI approach. The primary reason cited for this is a lack of resources to carry out improvement collaboratives. This finding does raise the concern that as IPs resume working with more independence from the PQI, that QI methods will continue to evolve and change between regions. This situation would create, yet again, a lack of harmonization in QI methods between regions. This concern should be mitigated to some extent by the circulation of the Tanzania Quality Improvement Framework.

The main points related to the effectiveness of the PQI (study objective two) are summarized in Table 11, which addresses, for key aspects of the PQI, facilitating factors, challenges, and recommendations. These are further broken down into the various levels of the PQI: national, implementing partner, RHMT/CHMT, and QI teams.

The Partnership for Quality Improvement in Tanzania has demonstrated promising results in a little over two years in the three regions examined during this study. URC, PharmAccess, and the NACP have not only shown results in almost all clinical indicators, but also have effectively recruited and trained IP organizations, engaged QI teams and RHMTs/ CHMTs, and developed a harmonized quality improvement approach among partners. The combination of these tasks has been a significant challenge. While opportunities exist to further improve the PQI approach, learning from this approach will be useful for QI programs in Tanzania as well as for the international community. One of the RHMT members from a focus group in Morogoro provided the best summary: *“Unity is strength. When different organizations work together, they bring different expertise to the team which fosters improvement.”*

Table 11: Main themes, facilitating factors, challenges, and recommendations for the PQI

Main Themes	Facilitating Factors	Challenges	Recommendations
National Level			
Harmonization of a common QI model	<p>URC/ PharmAccess have taken leadership in a “non-threatening way” to build consensus.</p> <p>Implementation of the TQIF (with substantial leadership from URC and PharmAccess) is expected to lead to greater harmonization.</p>	<p>TQIF has not yet been operationalized.</p> <p>Many models/ programs for QI exist and are being implemented in parallel with PQI.</p> <p>IPs are not spreading PQI to additional regions as originally planned.</p>	<p>Strengthen involvement of national level MoHSW and NACP stakeholders in learning sessions and coaching sessions.</p>
Pace and scale	<p>MoHSW and NACP (national level) see the PQI as a viable model for Tanzania.</p>	<p>NACP wants a faster pace of work to cover more regions of Tanzania; PQI is limited by human and financial resources as well as buy-in from IPs to move at this pace.</p> <p>MoHSW/NACP would like to see an integrated approach to QI that improves care delivery holistically, not just care and treatment of HIV/AIDS.</p> <p>National-level capacity to coordinate QI is limited in terms of both funding and manpower.</p>	<p>MoHSW/NACP should take the lead in the design of a feasible, integrated QI approach.</p>
Ownership of PQI and results	<p>A sense of collective ownership of results exists among all parties.</p> <p>The reaction among all stakeholders overall is generally positive about the work in the first four regions.</p>	<p>The process for collecting and circulating data among all stakeholders remains unclear.</p>	<p>Deepen advocacy with the NACP/MoHSW through the regular circulation of data.</p> <p>Clarify the process for circulating data to all members on a regular basis (between QI teams, RHMT/CHMT, IPs, MoHSW/ NACP).</p>

Main Themes	Facilitating Factors	Challenges	Recommendations
Implementing Partners			
Adoption of PQI methods	URC and PharmAccess have successfully integrated PQI into IP work streams. Preliminary interviews suggest buy-in to the improvement collaborative approach; IPs customized the approach for spread to new regions. Similar ideologies and common goals will help establish a strong working relationship.	The recruitment of new organizations requires lengthy negotiation to harmonize QI approaches. IPs do not have a consistent opportunity to meet and learn from each other; these meetings have been difficult to organize in the past with frequent travel to the field.	Develop a consistent forum for IP stakeholders to build their skills in QI and exchange learning across regions.
QI capacity	Individual contributors (from IP organizations) describe PQI as a tremendous professional development opportunity.	A common theme among all IPs is the need for more coaching and individual attention to health facilities.	Provide consistent opportunities for IP staff to learn about improvement science and build their own skill set.
Resources	Working in an organizational partnership has been a positive experience as it pools together knowledge as well as financial and human resources.	IPs like the improvement collaborative model approach, but (with the exception of CHAI) are not replicating it with their own funds as planned. It is not clear how IPs will substitute certain aspects of the collaborative model.	Identify and try some modifications and/or alternatives to the collaborative approach to QI. Estimate costs to guide decision making with current and prospective IPs.
RHMTs/ CHMTs			
QI capacity	RHMTs and CHMTs show high levels of engagement in PQI.	Some RHMTs and CHMTs feel threatened by the high level of QI skill among health facilities as they are expected to oversee the QI activities.	Increase targeted skill building activities for CHMT and RHMT (e.g., leadership breakout session for RHMT/ CHMT during LS, leadership coaching)
Engagement	RHMTs and CHMTs have begun to assume ownership for PQI by including QI in budgets and conducting regional trainings.	RHMTs and CHMTs have many responsibilities which sometimes prevent full participation in the PQI.	Suggest that RHMTs/ CHMTs be assigned to working with the PQI to ensure greater consistency.

Main Themes	Facilitating Factors	Challenges	Recommendations
QI Teams			
Data and results	<p>Promising collaborative level results have been achieved in almost all indicators.</p> <p>QI team members report an intent to sustain QI and results.</p>	<p>It is difficult to draw firm conclusions from collaborative databases as the sites reporting vary from month to month.</p> <p>Data from collaborative databases are not fully leveraged during learning sessions.</p>	<p>Model the use and interpretation of data at all possible opportunities (e.g., learning sessions, coaching visits, communications with teams).</p> <p>Intensify the exchange of learning between regions and health facilities by formally documenting and spreading successful changes.</p>
QI capacity	<p>Teaching methods have been simplified to explain complicated concepts.</p>	<p>Confusion between the number of QI approaches remains. Multiple QI activities result in shortages in staff (from frequent and uncoordinated activities) and duplicate tools/ data collection.</p> <p>Turn-over in QI team members necessitates orienting new members.</p>	<p>Begin to recruit natural leaders for QI among QI teams, CHMTs, RHMTs, and the MoHSW. Gradually transition facilitation of learning sessions and coaching over to these individuals (with support from PQI IPs).</p>
Coaching	<p>QI team members stated during focus groups that they value coaching visits and requested that they occur more frequently.</p>	<p>Coaching visits often occur with little notice and at inconvenient times.</p> <p>Teams need consistent support in the field, especially with time series charts and process mapping.</p>	<p>Alter the coaching schedule to provide the most support immediately after the first learning session and help them with their first PDSA and data collection.</p> <p>Consider changes to coaching (e.g., smaller groups, prioritize convenience for health facility).</p>

APPENDIX 1: DATA COLLECTION TOOLS

Tool 1A: QI Team Survey

Tool 1B: Discussion Group Guide for QI Team Members

Tool 2A: CHMT Survey

Tool 2B: RHMT Survey

Tool 3A: Survey for Implementing Partners

Tool 3B: Discussion Guide for Individual Interview with IP Stakeholders

Tool 4: Discussion Guide for Individual Interview with MoHSW Stakeholders

QI Team Survey (Tool 1A)

Date: ___ / ___ / ___ (day/month/year)

Region: _____

District where you work: _____

Your current position _____

Tick the type of facility where you work.

District Hospital Regional Hospital Health Centre

Please check one answer in the boxes below.

Previous experience on a quality improvement team before this program?	Role on QI Team	Employment category	Duration working at this facility	Duration on QI team
<input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> other	<input type="checkbox"/> Leader <input type="checkbox"/> Coach <input type="checkbox"/> Member <input type="checkbox"/> Other	<input type="checkbox"/> Physician <input type="checkbox"/> Nurse <input type="checkbox"/> Midwife <input type="checkbox"/> Other	<input type="checkbox"/> Years <input type="checkbox"/> Months	<input type="checkbox"/> Years <input type="checkbox"/> Months

Part I. Self Assessment of Competency in QI Skills

<p>Instructions: I am going to ask you several questions about your skills in QI. Tell me, FIRST OF ALL, if you EVER carry out this task or not, and THEN SECONDLY how well you COULD OR can carry out this task (EVEN IF YOU DO NOT CARRY IT OUT ON YOUR TEAM). You can answer with: “Yes, I can do it without any problems”, “Yes I can do it, but with some difficulty”, or “No, I cannot carry out this task.”</p>	<p>Circle a single response in each category.</p>				
	<p>Category A</p>		<p>Category B</p>		
	<p>Do you do this task?</p>		<p>If you are doing it how well can you do it? If you are not doing, how well could you do it?</p>		
	<p>Yes, I do it</p>	<p>No, I don't do it</p>	<p>Yes, I can do it without problems</p>	<p>Yes, I can do it but with some difficulty</p>	<p>No. I am not/could n't be able to carry out this task</p>
1. Draw and analyze a process analysis	1	0	1	2	0
2. Carry out a PDSA cycle (Plan-Do-Study-Act)	1	0	1	2	0
3. Develop a work plan for the QI team	1	0	1	2	0
4. Lead a QI team meeting	1	0	1	2	0
5. Write QI team meeting minutes	1	0	1	2	0
6. Document changes that have been implemented.	1	0	1	2	0
7. Calculate the indicator values	1	0	1	2	0
8. Draw the graphs for a time series chart	1	0	1	2	0
9. Write changes and other events on the graph	1	0	1	2	0
10. Interpret the chart	1	0	1	2	0
11. Prepare for a learning session	1	0	1	2	0
12. Debrief QI team on work done at a learning session	1	0	1	2	0

For each question, please respond with one of the following : strongly agree, agree, neither agree nor disagree, disagree, strongly disagree		Circle a single response for each question.				
		Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
1	Work in the QI team is divided among team members (not just one person doing all the work.	1	2	3	4	5
2	The team takes responsibility for gaps in quality of care	1	2	3	4	5
3	When a member is absent, tasks are redistributed	1	2	3	4	5
4	All team members are involved in planning and implementing changes.	1	2	3	4	5
5	Everyone's opinions (regardless of their position or level) are taken into account by the team.	1	2	3	4	5
6	When a problem is not within the team's control the QI team involves external people to help solve it.	1	2	3	4	5
7	I believe that what I do as a QI team member is very important.	1	2	3	4	5
8	Our QI team is well appreciated by all the staff at this health facility, including those in administration.	1	2	3	4	5
9	I have the knowledge and ability to carry out what others expect of me as a QI team member.	1	2	3	4	5
10	I have the supplies and equipment needed and the time available to carry out my QI tasks.	1	2	3	4	5
11	The QI coach (or team leader) recognizes my efforts as a QI team member.	1	2	3	4	5
12	It is difficult for me to say something that I think the QI team leader (or coach) would not agree with.	1	2	3	4	5
13	I have opportunities within the QI team to learn or advance in my profession.	1	2	3	4	5
14	People are rewarded when they perform their jobs well as QI team members.	1	2	3	4	5
15	We will sustain the results that we achieve over time.	1	2	3	4	5
16	Our quality improvement team will continue to function after this program is over.	1	2	3	4	5

Please provide any additional comments on your answers to the questions in the space below.

QI Team Member Discussion Guide (Tool 1B)

All QI team members at the learning session should participate in this activity. Divide QI teams into a maximum of 10 people each. Set the chairs up in a circle in advance. You will start by administering the survey and then move straight into the focus group discussion. It will save time to arrange the groups and chairs beforehand.

Make sure to have a recorder to capture the discussion

Introduction:

- *We would like to learn about your experiences so far participating in quality improvement (by quality improvement we mean participating in this improvement collaborative through PQI). The information that you provide us is not intended to judge or evaluate your work, but to help us learn how to make quality improvement programs better in the future. There are no right or wrong answers, only honest answers about your experiences*
- *The information that you provide us will be confidential. Please be honest in your answers as this will help us learn and improve.*
- *We will start out by taking a brief survey. After we complete the survey as a group, we will have a discussion about some questions about your experiences in quality improvement. This discussion will be recorded to make sure that we are able to capture all of the information that you give us. Let's start by taking the survey. I will read out each question to you. Please circle the appropriate response. If you have specific examples or other things you would like to mention, please write them below in the comments section or on the back of the paper.*

QI Team Member Discussion Guide

1. Please describe a result that your quality improvement team has achieved that you are most proud of.
 - a. Could you describe the methods that your team used to achieve that result?
2. How did your team learn about quality improvement?
 - a. Which aspects of quality improvement were the simplest to understand for you? For your team?
 - b. Which aspects of quality improvement have been more difficult to understand for you or are you and your team still struggling with?
3. How are the results from the work of your quality improvement team recognized or rewarded within the facility? Within the district? From higher levels?
4. Please describe a typical visit from your QI coach.
 - a. What is most helpful about coaching visits?
 - b. How could coaching be improved to better support your quality improvement team?
 - c. Have coaches provided consistent and adequate support throughout the program on clinical skills, quality improvement, and the use of data?
5. What do you like most about participating in quality improvement? What do you think could be better about participating in quality improvement?
6. What aspects of QI activities that you are doing now do you intend to continue when the program is over? What will you do to ensure that the results you have/will have achieved will be sustained?

Survey for CHMT Members (Tool 2A)

Date: ___ / ___ / ___ (day/month/year)

District where you work: _____

Current job title _____

How long have you been in this role? _____

Do you coach quality improvement teams? (please check one) [yes] [no]

What is your role in quality improvement?

Instructions: For each question, respond with one of the following : “strongly agree, agree, neither agree nor disagree, disagree, strongly disagree.”	Circle a single response for each question.				
	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
1. I believe that my role as a quality improvement coach is important.	1	2	3	4	5
2. I have the knowledge and skills to meet the expectations placed on me to coach quality improvement teams.	1	2	3	4	5
3. I have the time available to carry out my tasks as a quality improvement coach.	1	2	3	4	5
4. I work closely with quality improvement team members to solve problems in their health facilities.	1	2	3	4	5
5. I am recognized for performing my job well as a quality improvement coach.	1	2	3	4	5
6. Suggestions by quality improvement team members in health facilities are taken into account by the CHMT.	1	2	3	4	5

Please provide any additional comments on your answers to the questions in the space below.

<p>Instructions: I am going to ask you several questions about your skills in QI. Tell me, FIRST OF ALL, if you EVER carry out this task or not, and THEN SECONDLY how well you COULD OR can carry out this task (EVEN IF YOU DO NOT CARRY IT OUT ON YOUR TEAM). You can answer with: “Yes, I can do it without any problems”, “Yes I can do it, but with some difficulty”, or “No, I cannot carry out this task.”</p>		Circle a single response in each category				
		Do you do this task?		Would you be able to carry out this task?		
		Yes, I do it or I have done it	No, I have never done it	Yes, I can do it without problems	Yes, I can do it but with some difficulty	No, I am not able to do it
Quality Improvement Skill	Brief example of how you have used this skill, if applicable					
1. Train others in quality improvement principles and methods		1	0	1	2	0
2. Coach quality improvement teams in collecting and analyzing data		1	0	1	2	0
3. Coach quality improvement teams in developing and testing changes with Plan-Do-Study-Act (PDSA) cycles		1	0	1	2	0
4. Coach quality improvement teams in preparing for learning sessions		1	0	1	2	0
5. Involve leaders from health facilities in QI		1	0	1	2	0
6. Helping teams resolve obstacles to quality improvement		1	0	1	2	0

Instructions: I am going to ask you several questions about your skills in QI. Tell me, FIRST OF ALL , if you EVER carry out this task or not, and THEN SECONDLY how well you COULD OR can carry out this task (EVEN IF YOU DO NOT CARRY IT OUT ON YOUR TEAM). You can answer with: “Yes, I can do it without any problems”, “Yes I can do it, but with some difficulty”, or “No, I cannot carry out this task.”		Circle a single response in each category				
		Do you do this task?		Would you be able to carry out this task?		
		Yes, I do it or I have done it	No, I have never done it	Yes, I can do it without problems	Yes, I can do it but with some difficulty	No, I am not able to do it
Quality Improvement Skills	Brief example of how you have used this skill, if applicable					
1. Share ideas and tools between health facilities		1	0	1	2	0
2. Prepare materials for learning sessions with quality improvement teams		1	0	1	2	0
3. Spread improvement ideas for care and treatment and PMTCT services to other sites in your district		1	0	1	2	0
4. Use data about quality for decision making and planning in your district		1	0	1	2	3
5. Advocate for resources for QI in district budgets		1	0	1	2	3

Self Assessment of Competency in Quality Improvement Skills (RHMT)

Instructions: I am going to ask you several questions about your skills in QI. Tell me, FIRST OF ALL , if you EVER carry out this task or not, and THEN SECONDLY how well you COULD OR can carry out this task (EVEN IF YOU DO NOT CARRY IT OUT ON YOUR TEAM). You can answer with: “Yes, I can do it without any problems”, “Yes I can do it, but with some difficulty”, or “No, I cannot carry out this task.”	Circle a single response in each category				
	Do you do this task?		Would you be able to carry out this task?		
	Yes, I do it or I have done it	No, I have never done it	Yes, I can do it without problems	Yes, I can do it but with some difficulty	No, I am not able to do it
1. Train others in quality improvement principles and methods	1	0	1	2	0
2. Coach CHMTs and health facilities in collecting and analyzing data	1	0	1	2	0
3. Coach quality improvement teams in developing and testing changes with Plan-Do-Study-Act (PDSA) cycles	1	0	1	2	0
4. Reviewing monthly reports and providing feedback	1	0	1	2	0
5. Coach quality improvement teams in preparing for learning sessions	1	0	1	2	0
6. Recognize CHMTs and health facilities for quality improvement results	1	0	1	2	0
7. Helping teams and CHMT resolve obstacles to quality improvement	1	0	1	2	0
8. Share ideas and tools between districts in your region	1	0	1	2	0
9. Design content for learning sessions	1	0	1	2	0
10. Facilitate learning sessions	1	0	1	2	0
11. Spread improvement ideas for care and treatment and PMTCT services to other sites in your region	1	0	1	2	0
12. Use data about quality for decision making and planning in your region	1	0	1	2	0
13. Provide resources for QI in regional budgets	1	0	1	2	0

Discussion Group Guide for RHMT/CHMT (Tool 2C)

Facilitator's Instructions:

- *All QI team members at the learning session should participate in this activity. Divide QI teams into a maximum of 10 people each. Set the chairs up in a circle in advance. You will start by administering the survey and then move straight into the focus group discussion. It will save time to arrange the groups and chairs beforehand.*
- *Make sure to have a recorder to capture the discussion*

Script:

- *We would like to learn about your experiences so far participating in quality improvement (by quality improvement we mean participating in this improvement collaborative through PQI). The information that you provide us is not intended to judge or evaluate your work, but to help us learn how to make quality improvement programs better in the future. There are no right or wrong answers, only honest answers about your experiences*
- *The information that you provide us will be confidential. Please be honest in your answers as this will help us learn and improve.*
- *We will start out by taking a brief survey. After we complete the survey as a group, we will have a discussion about some questions about your experiences in quality improvement. This discussion will be recorded to make sure that we are able to capture all of the information that you give us. Let's start by taking the survey. I will read out each question to you. Please circle the appropriate response. If you have specific examples or other things you would like to mention, please write them below in the comments section or on the back of the paper.*

Discussion Questions

1. Please describe an accomplishment from your health area (region or district) as a result of this quality improvement work that you are most proud of.
 - a. Could you describe the methods used to achieve that result?
2. How are the roles and responsibilities for quality improvement organized in your region and districts? What are the specific roles and responsibilities of the RHMT and CHMTs?
3. How were you prepared to function in your role to support quality improvement?
 - a. Which aspects of this role were easiest to learn for you?
 - b. Which aspects of this role have been more difficult to learn for you?
4. What kind of support has your region or district received to carry out quality improvement?
 - a. Is there any support that your region or district needs but is not receiving?
 - b. How are the quality improvement results from your region or district recognized or rewarded?
5. Please describe a typical coaching visit.
 - a. What do you think teams find most helpful about coaching visits to their health facilities?
 - b. How could coaching be improved to better support health facilities?
6. To what extent do you think that quality improvement is strengthening organizational structures at the regional level? At the district level?

7. Knowing what you know now, what changes would you suggest for quality improvement in other regions or districts?
8. In your opinion, how well has quality improvement worked? Are you receiving consistent messages and coaching across program partners?
9. What steps is the RHMT/ CHMTs taking to ensure that the improvements in healthcare service delivery and QI infrastructure are sustained after this program is over? What suggestions could you provide to make quality improvement more sustainable?

Survey for Implementing Partners (Tool 3A)

No	Instructions: I will read you a series of statements. For each question, please respond by circling one of the following that best reflects your opinion: strongly agree, agree, neither agree nor disagree, disagree, strongly disagree	Circle a single response for each question.				
		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1	I believe that my role in participating in quality improvement as an implementing partner is effective.	1	2	3	4	5
2	I have the knowledge and skills to meet the expectations placed on me to support quality improvement for my organization.	1	2	3	4	5
3	I have the supplies and equipment needed to carry out my tasks to oversee quality improvement.	1	2	3	4	5
4	I have the time available to carry out my tasks to support quality improvement.	1	2	3	4	5
6	Implementing partner organizations work well together to implement PQI.	1	2	3	4	5
7	I work closely with RHMT/ CHMT members and quality improvement teams to solve problems.	1	2	3	4	5
9	Suggestions by my organization are taken into account in the implementation of PQI.	1	2	3	4	5
10	I believe that the improvement collaborative approach is an effective method for improving the quality of care.	1	2	3	4	5
11	My organization has the opportunity to learn from the experiences of other implementing partners working with HCI	1	2	3	4	5
12	My organization will be (or is) prepared to lead improvement collaboratives alone in additional districts or regions.	1	2	3	4	5
13	My organization intends to extend the use of improvement collaborative to improve quality in other regions or technical areas.	1	2	3	4	5
14	I believe that the MoHSW, RHMT/CHMT and health facilities will be able to sustain improvements from PQI.	1	2	3	4	5
15	The quality improvement experiences from PQI will be important for influencing national policy on quality improvement.	1	2	3	4	5
16	Suggestions by implementing partners of PQI are taken into account by the central MoHSW in developing policy on quality improvement.	1	2	3	4	5

Please provide any additional comments on your answers to the questions in the space below.

Instructions: I am going to ask you several questions about your skills in QI. Tell me, FIRST OF ALL, if you EVER carry out this task or not, and THEN SECONDLY how well you COULD OR can carry out this task (EVEN IF YOU DO NOT CARRY IT OUT ON YOUR TEAM). You can answer with: “Yes, I can do it without any problems”, “Yes I can do it, but with some difficulty”, or “No, I cannot carry out this task.”		Circle a single response in each category:				
		Do you do this task?		Would you be able to carry out this task?		
		Yes, I do it or I have done it	No, I have never done it	Yes, I can do it without problems	Yes, I can do it but with some difficulty	No, I am not able to do it
QI Coaching	Brief example of how you have used this skill (if applicable)					
1. Train others in quality improvement principles and methods		1	0	1	2	0
2. Facilitate coaching visits to health facilities.		1	0	1	2	0
3. Coach RHMTs/CHMTs and health facilities in collecting and analyzing data		1	0	1	2	0
4. Coach RHMT/CHMTs and quality improvement teams in developing and testing changes with Plan-Do-Study-Act (PDSA) cycles		1	0	1	2	0
5. Reviewing monthly reports and providing feedback		1	0	1	2	0
6. Coach RHMTs/CHMTs and quality improvement teams in preparing for learning sessions		1	0	1	2	0

APPENDIX 2: COLLABORATIVE LEVEL GRAPHS FOR INDICATORS SHOWING IMPROVEMENT

Daily Prophylaxis for HIV exposed children (under 18 months)

Figure 6: Tanga collaborative-level improvement for the percent of HIV-exposed children (under 18 months) receiving daily prophylaxis

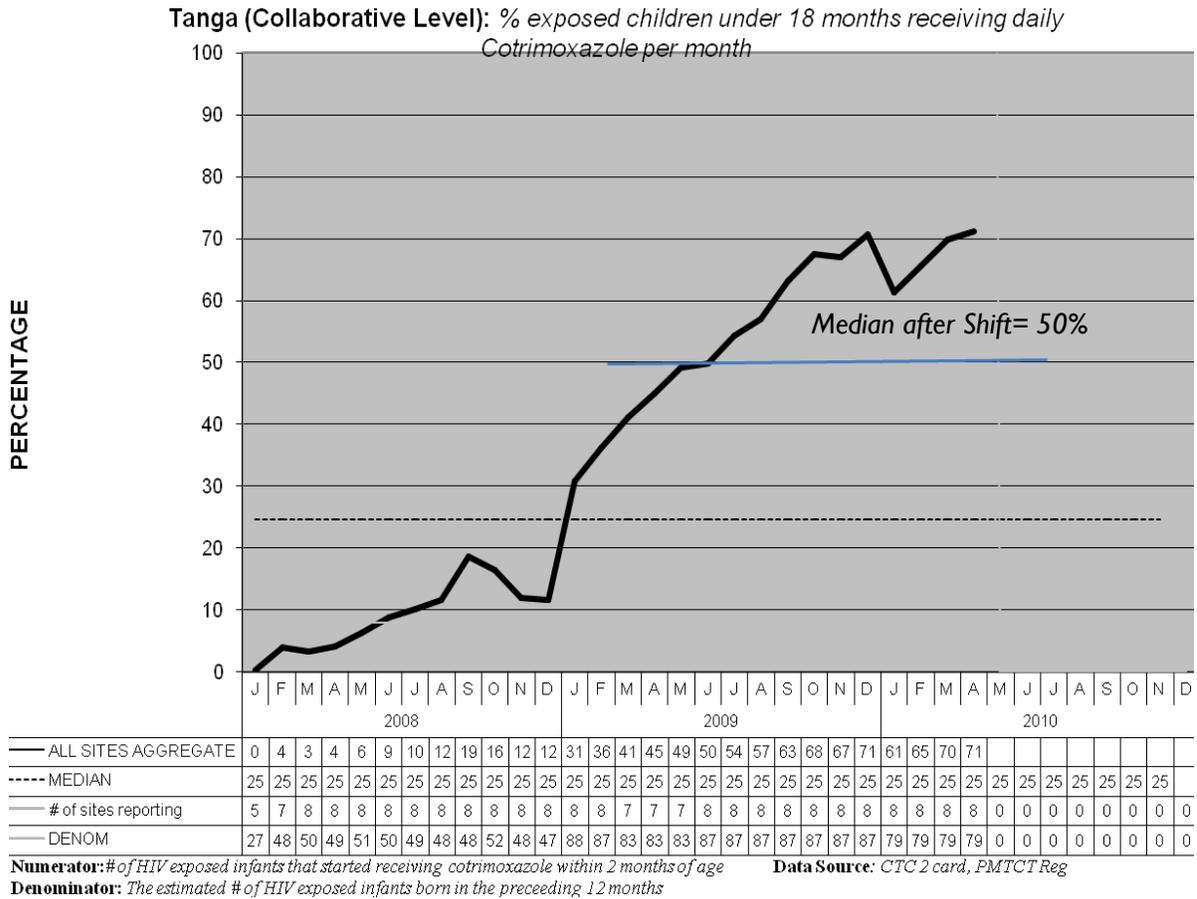
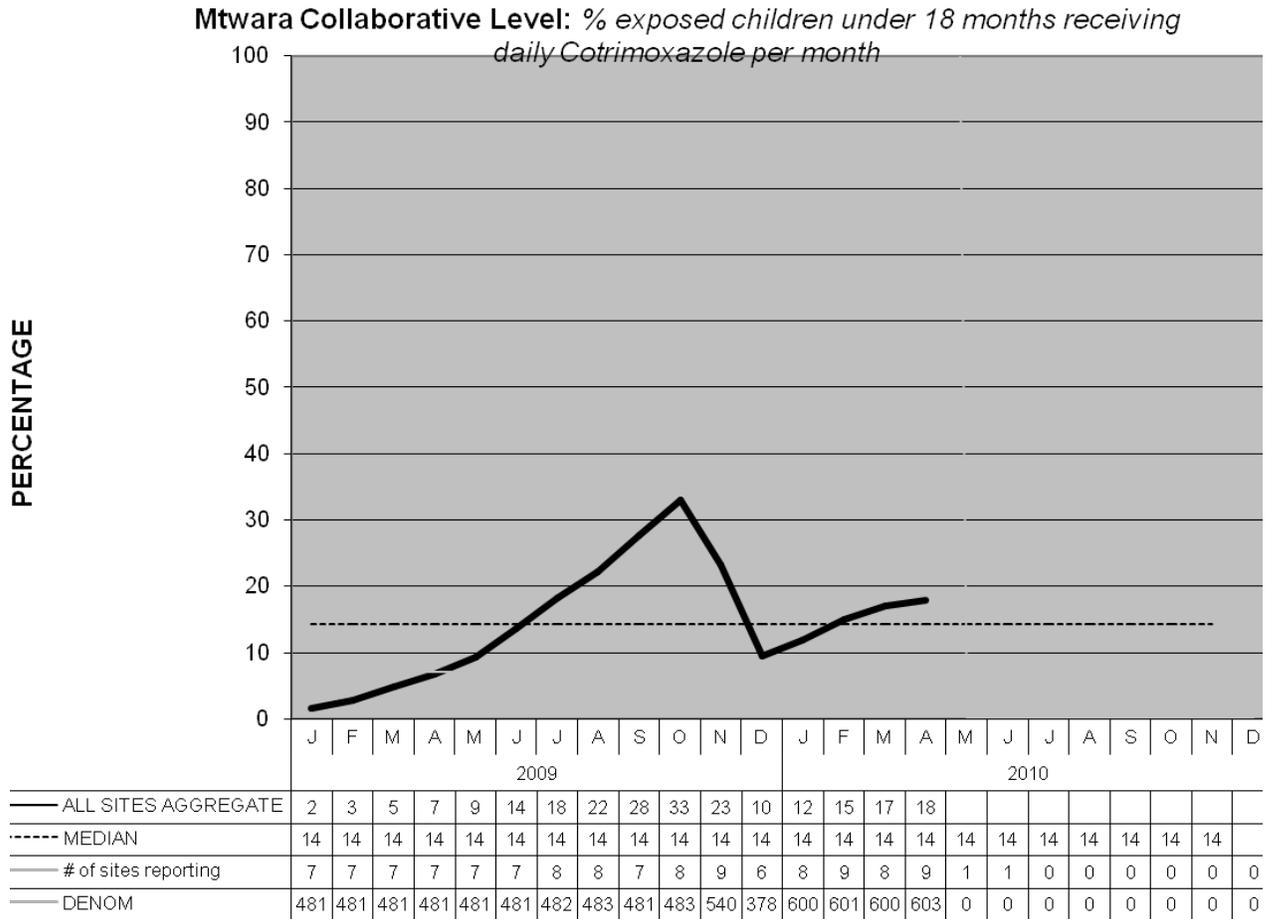


Figure 8: Mtwara collaborative-level results for HIV-exposed children (under 18 months) receiving daily prophylaxis



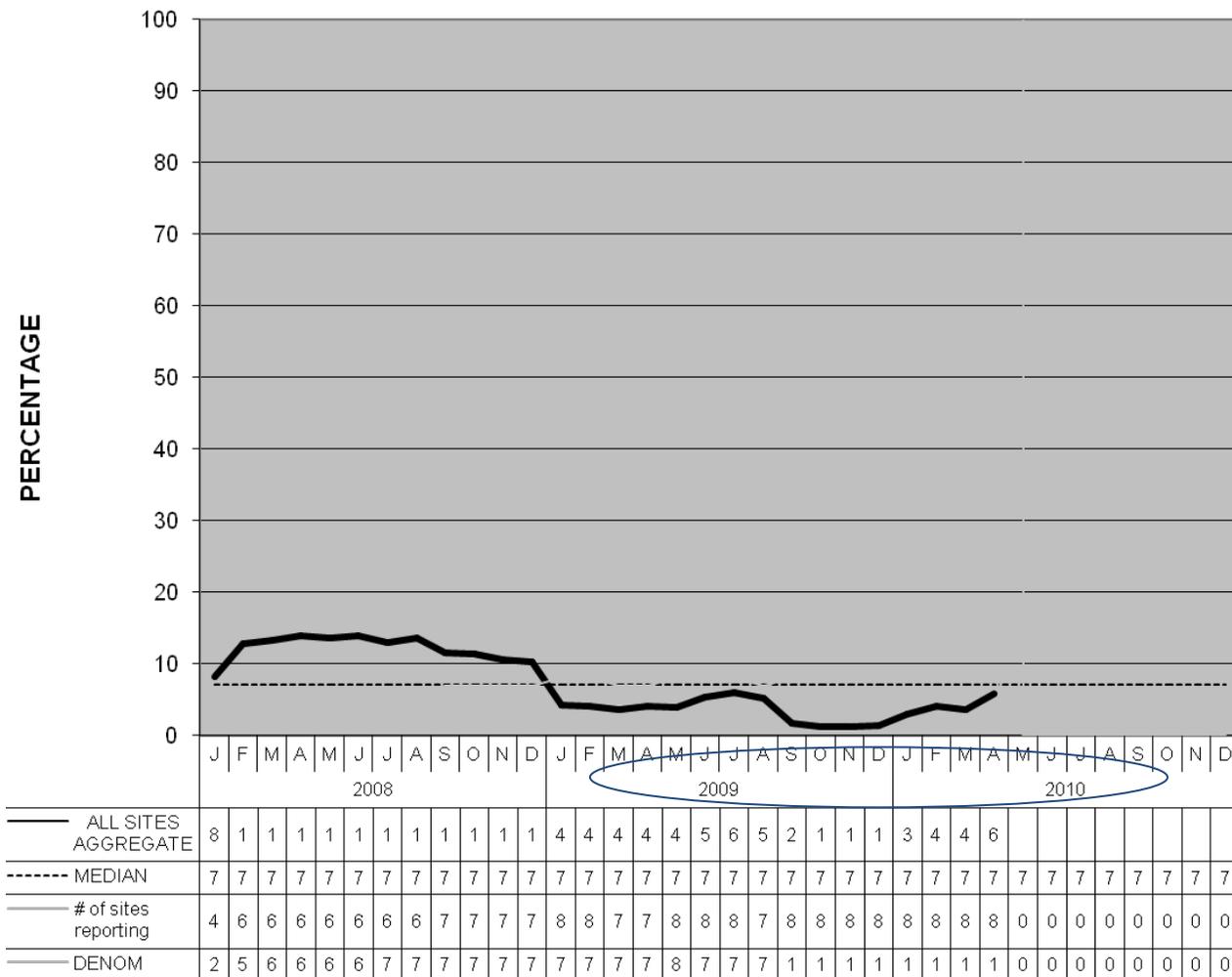
Numerator: # of HIV exposed infants that started receiving cotrimoxazole within 2 months of age
Denominator: The estimated # of HIV exposed infants born in the preceeding 12 months

Data Source: CTC 2 card, PMTCT Reg

Reducing the percent of HIV-positive patients on ART lost to follow-up

Figure 11: Tanga collaborative-level results on reducing monthly LTFU of patients on ART

Tanga Collaborative: % of HIV positive patients on ART LTFU per month



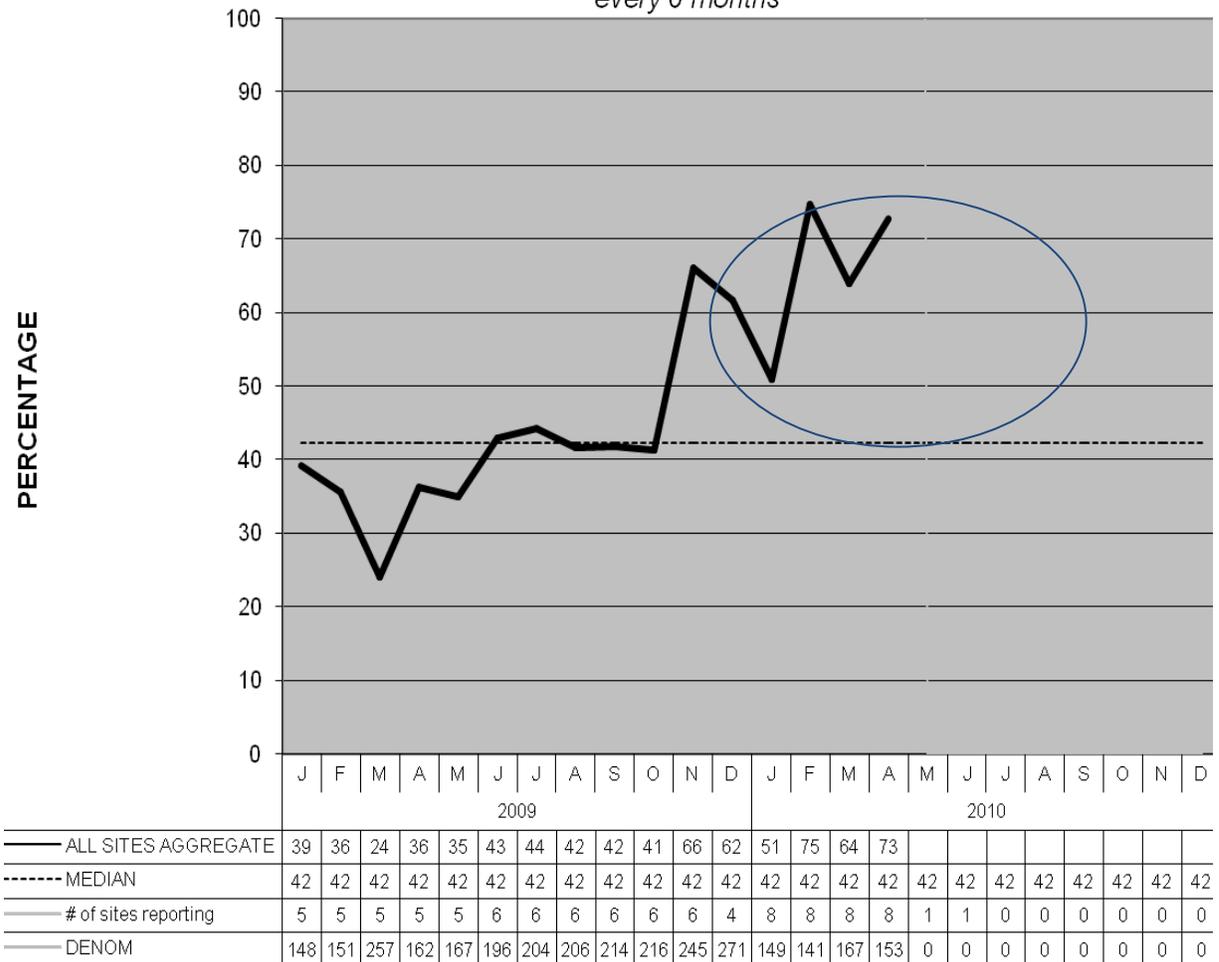
Numerator: # of patients on ART who are lost to follow up for at least three consecutive months

Denominator: Total # of patients on ART seen at the clinic according to their scheduled appointments

CD4 testing every six months for HIV-positive patients

Figure 12: CD4 testing every six months for HIV-positive patients in Mtwara

Mtwara Collaborative: % of HIV patients from CTC receiving CD4 test once every 6 months

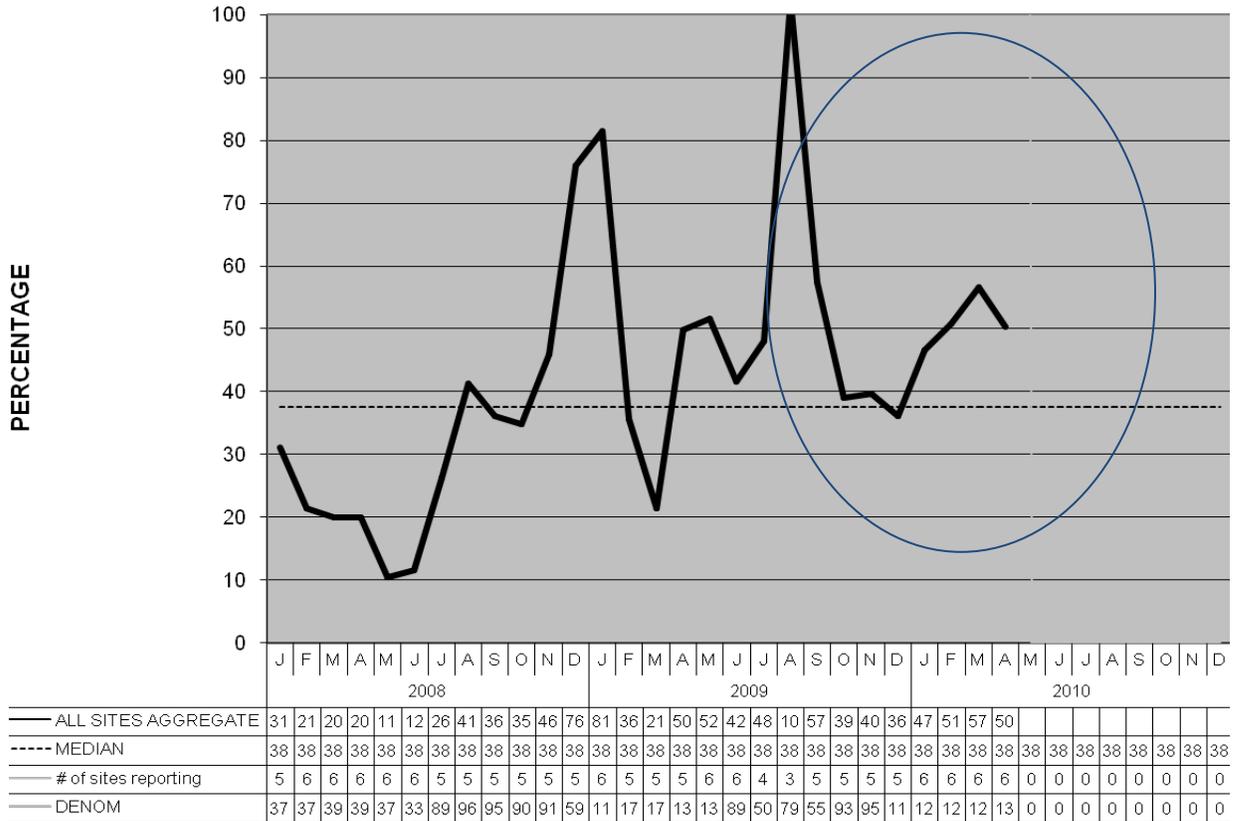


Numerator: # of HIV patients in general care seen at the clinic in the past month who had a CD4 in the past 6 months

Denominator: Total # of HIV patients in general care seen at the clinic within the past 6 months

Figure 13: CD4 testing every six months for HIV-positive patients in Tanga

Tanga Collaborative: % of HIV patients from CTC receiving CD4 test once every 6 months

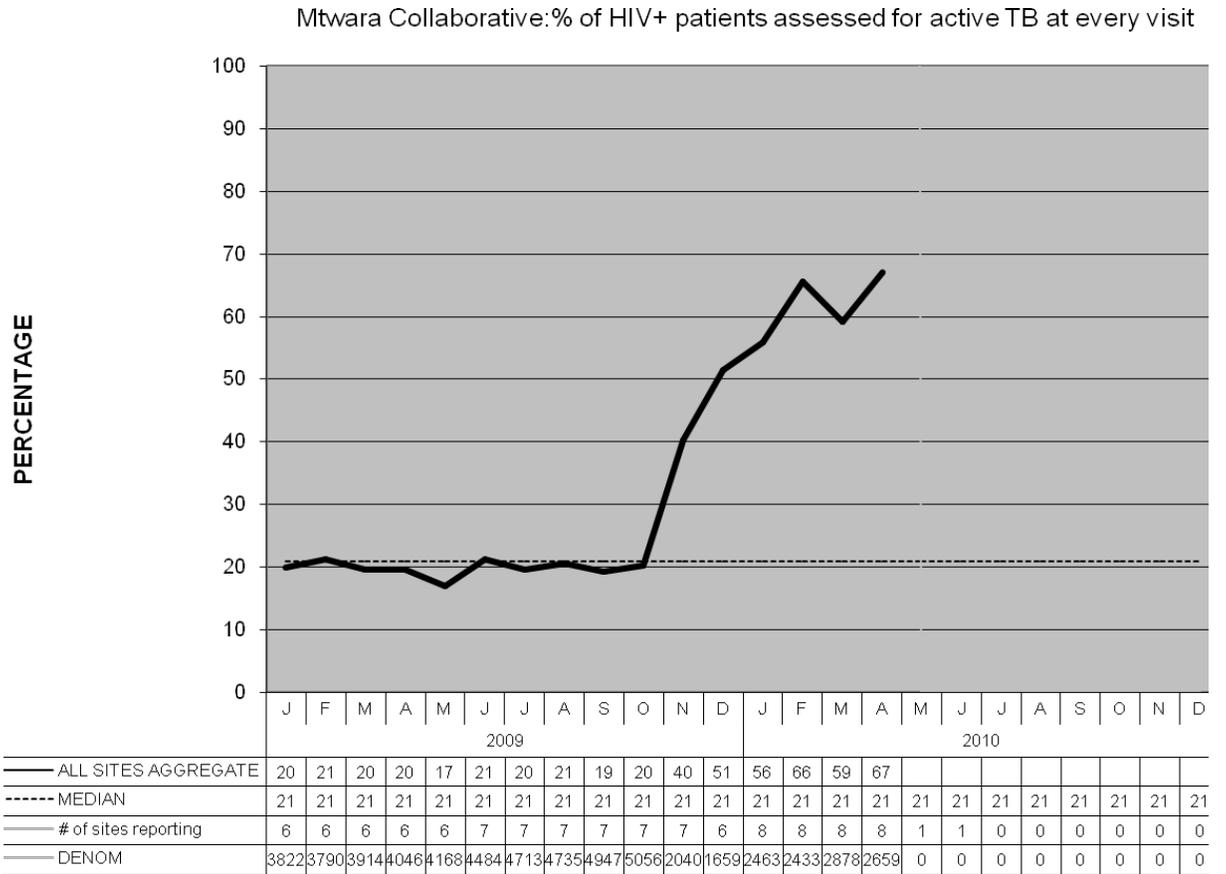


Numerator: # of HIV patients in general care seen at the clinic in the past month who had a CD4 in the past 6 months

Denominator: Total # of HIV patients in general care seen at the clinic within the past 6 months

Assessment for active TB at every visit

Figure 14: TB screening at every visit for HIV-positive patients in Mtwara



Numerator: # of patients on ART who are lost to follow up for at least three consecutive months

Denominator: Total # of patients on ART seen at the clinic according to their scheduled appointments

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