



## TECHNICAL REPORT

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# Lessons Learned from Applying Collaborative Improvement Methodologies to Strengthen the Performance and Productivity of HIV Human Resources

**NOVEMBER 2016**

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**November 2016**

USAID Applying Science to Strengthen and Improve Systems Project

**DISCLAIMER**

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For more information on the work of the USAID ASSIST Project, please visit [www.usaidassist.org](http://www.usaidassist.org) or write [assist-info@urc-chs.com](mailto:assist-info@urc-chs.com).

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## Acronyms

ANC	Antenatal care
ART	Antiretroviral therapy
ASSIST	USAID Applying Science to Strengthen and Improve Systems Project
CHW	Community health worker
CHW AIM	CHW Assessment and Improvement Matrix
FP	Family planning
HBC	Home-based care
HCI	USAID Health Care Improvement Project
HIV	Human immunodeficiency virus
HTC	HIV testing and counseling
IST	In-service training
MNCH	Maternal, newborn and child health
MOH	Ministry of Health
NACS	Nutrition assessment, counseling and support
OHA	Office of HIV and AIDS
OVC	Orphans and vulnerable children
PEPFAR	U.S. President's Emergency Plan for AIDS Relief
PHFS	Partnership for HIV-Free Survival
PMTCT	Prevention of mother-to-child transmission of HIV
QI	Quality improvement
TB	Tuberculosis
URC	University Research Co., LLC
USAID	United States Agency for International Development
USG	United States Government
VMMC	Voluntary medical male circumcision

## Introduction

Quality of HIV services—the right care in the right place at the right time—is key to controlling the HIV epidemic and achieving the Impact Agenda of the U.S. President’s Emergency Plan for AIDS Relief (PEPFAR) 3.0 Strategy (PEPFAR 2014b). Quality improvement methodologies, which encompass a number of approaches to understand the current level of service quality, identify problems, and make measurable improvements, are now well accepted tools to ensure that interventions are implemented according to established standards, that programs are effective, and that outcomes are achieved (PEPFAR 2014a). The 90-90-90 HIV treatment strategy recognizes the need to focus on the quality and outcomes of antiretroviral therapy in terms of viral suppression and to do so at massive scale (UNAIDS 2014).

Quality improvement (QI) methods also contribute to achieving the PEPFAR Efficiency Agenda by optimizing the use of existing resources to produce the best care possible, reducing waste and duplication. Providing more resources may be necessary to have effective HIV services in resource-constrained settings, but this approach alone fails to address the root causes of many problems within inefficient and poorly designed health care systems. QI methods can increase efficiency by producing more and better quality services for the resources invested.

By building local capacity to continuously improve the quality of HIV programs, QI also serves the PEPFAR Sustainability Agenda. Indeed, the PEPFAR Quality Strategy recognizes that building and institutionalizing host country capacity to monitor and continually improve the quality of HIV programs is a critical part of PEPFAR’s investment in quality (PEPFAR 2014a).

While QI methodologies have been widely applied to improve the quality of clinical and community-based HIV services in PEPFAR-supported programs—including treatment, care and support of adults and children, HIV counseling and testing, prevention of mother-to-child transmission (PMTCT), voluntary medical male circumcision (VMMC), and integration of HIV with other services—less familiar to many are applications of QI to target improvements in performance and productivity of human resources for health (HRH), especially HRH for HIV services. Yet QI methods readily lend themselves to issues of human resources performance management, to address gaps in performance and productivity and ensure optimal use of available HRH.

Since 2009, the USAID Office of HIV/AIDS has actively supported the development and field-testing of a wide range of strategies and interventions to improve HRH performance and productivity to help overcome gaps in HRH availability, including collaborative improvement methodologies. Collaborative improvement engages a large number of teams in applying process improvement to achieve a common objective, using common indicators. Collaborative improvement enhances the efficiency of the improvement work by actively fostering sharing of learning and successful practices across all teams and is oriented toward large-scale improvement (HCI 2008).

This paper describes key applications of collaborative improvement to address HRH issues and describes the primary lessons learned about increasing HIV health worker effectiveness, performance, and productivity using QI methodologies. It highlights how the wider use of QI methodologies to improve HIV service delivery presents the opportunity for orienting such interventions to also impact HRH performance and productivity and overcoming challenges with HRH availability in facilities delivering HIV services.

## Overview of Collaborative Improvement Methods

Traditionally, health care improvement strategies focused on adding more or different inputs and on the use of control systems or structures to enforce or assure quality. Such approaches are often referred to as **quality assurance** (QA) and include strategies such as developing standards and policies that articulate expectations for quality; organization of quality structures (such as national quality assurance

programs); dissemination of standards and best practices through educational materials and guidelines; training health workers to increase their knowledge and skills; and assessment of whether minimum conditions are being met by health workers or health facilities as part of licensing or accreditation activities.

Since the early 1990s, USAID has promoted the application of methodologies that build on traditional QA approaches like standards, to incorporate **continuous quality improvement** and **process improvement** approaches that analyze problems in care delivery processes and introduce iterative changes to overcome them (Massoud et al. 2001). These approaches, initially applied to services such as obstetric care, immunizations, management of childhood illness, and family planning, were later applied widely in HIV care (Heiby 1998; ASSIST 2014).

Based on results achieved, interest in improvement grew rapidly, with many organizations developing branded models and applying them across USG-supported HIV programs. While these models use different terminology, they often share common core elements, including: process analysis, use of standards, identifying key barriers and closing gaps between ideal and observed performance through active change to care processes, defining priorities for the improvement effort, empowering providers to identify problems and find solutions, and monitoring results (Tawfik et al. 2010).

A key tenet of improvement is that making care better always requires change, but not all change necessarily leads to improvement. Without “change”, every system will continue to produce the same results it has always produced. In other words, *“every system is perfectly designed to get the results it gets”* (Paul Batalden). Managing change is central to improvement efforts, whether or not such efforts are prospective (e.g., defining aims and proactively testing changes to processes of care to try to reach the aim) or retrospective (e.g., auditing records to identify quality failures to identify and correct root problems contributing to poor quality).

In process improvement, teams made up of front-line health workers, supervisors, and others involved in care test ideas to determine if they lead to improvement in their local setting. While context has a strong influence on which changes may be most feasible and effective for overcoming gaps in a specific setting, categories of quality and system gaps and effective changes (solutions) are often common across settings. Increasingly, many improvement approaches mobilize teams to work together across health system levels and geographic sites to identify, test, and share successful changes for overcoming common quality and system gaps. Promoting regular shared learning among these teams helps to accelerate and scale up best practices for overcoming common barriers to delivery of high quality of care.

**Collaborative improvement** is a variant of process improvement that organizes a large number of teams or sites to work together for a time-bound period (typically, 12 to 24 months) to achieve significant improvements toward a common aim (e.g., prevention of mother-to-child transmission of HIV) (IHI 2003). The collaborative approach combines traditional quality improvement methods of teamwork, process analysis, compliance with standards, measurement of quality indicators, training, job aids, and coaching with techniques based on social learning and diffusion of innovation theories.

In collaborative improvement, teams in different sites (i.e., facilities or communities) work independently to test out changes in how to improve the delivery of care. Teams use a common set of indicators to measure the quality of the care processes the collaborative is trying to improve and, where possible, the desired health outcomes. The collaborative organizes regular peer-to-peer sharing among teams through learning sessions in which team representatives come together to learn from each other about which changes have been successful and which were not. This results in a dynamic improvement strategy in which many teams working on related problem areas can learn from each other in a way that facilitates rapid dissemination of successful practices. In its emphasis on spread and scale-up of improvements, the improvement collaborative model offers a powerful tool in the arsenal of proven improvement methods.

## Applications of Collaborative Improvement to HRH Performance at Sub-National and Facility Levels

The USAID Office of HIV/AIDS (OHA) has invested in efforts to test the use of collaborative improvement methods to improve HRH performance and productivity, primarily focused on HIV service providers. The first such application took place in [Niger](#) in 2009-2011 as a result of an opportunity with the Ministry of Health to focus on HRH (Crigler et al. 2011). This work, implemented by the USAID Health Care Improvement Project, was novel in its use of collaborative improvement to address health workforce management. The assessment methods and improvement approach first tested in Niger were then applied in high-burden HIV settings to increase the performance and/or productivity of human resources supporting HIV services at both the facility and community levels in [Uganda](#), [Tanzania](#), [Ethiopia](#), and [Mozambique](#) (Wittcoff et al. 2010; Wittcoff et al. 2011; Maggige et al. 2013; Shrestha 2014; Stover et al. 2015).

Over the period 2009-2014, OHA supported eight applications of collaborative improvement to improve health worker performance by applying one or more of the following HRH strategies: aligning health worker tasks and clinical care objectives, strengthening teamwork through applying principles of team-based performance management, increasing health worker job commitment and engagement (through supervisor support and feedback), strengthening health worker competencies (through peer mentoring), improving the quality of in-service training (through coordination and rationalization of training activities), and, in the case of community-level services, extending the reach of community health workers (through engaging community groups).

Seven of the eight collaborative improvement interventions optimized the existing HIV care workforce and made better use of existing resources through task sharing, job/task analysis and redesign to streamline tasks and reduce duplication and non-productive time, and improving the efficiency of in-service training. Collaborative improvement interventions also strengthened the capacity of government staff at the district and facility levels to support facility-level quality improvement and health worker performance, including [strategies that increase the improvement skills of district managers](#) and that engage existing community resources in health care quality improvement and retention of HIV patients in care (Kiwia and Foster 2016). The eight HRH collaborative improvement applications are described briefly by country in **Table 1** below.

**Table 1. HRH collaborative improvement applications, 2009-2014**

Country (No. of Sites)	Collaborative Objective	Types of HRH Involved	Services	Key Results
<b>Niger</b> (15 facilities and eight district management teams)	Improve health worker performance, productivity, quality of care, supervision, and clinical coordination	Doctors, nurses, midwives, technicians, social workers, auxiliary staff	Maternal and newborn care, family planning (FP)	% deliveries attended by skilled workers increased from 27% to 45% Under-five mortality from severe malaria decreased from 15% to 4% % of women of reproductive age accepting FP increased from 10% to 36%
<b>Ethiopia</b> (9 health posts)	Strengthen linkages between the formal health system and informal community system	Health extension workers	Antenatal care (ANC), HIV testing	259 pregnant women identified by community groups, of whom 86% registered for antenatal care at a health post Number of pregnant women tested for HIV increased from 11 in July 2011 to 191 in June 2012 in the Tole District health center.

Country (No. of Sites)	Collaborative Objective	Types of HRH Involved	Services	Key Results
Tanzania (12 facilities)	Improve the effectiveness and efficiency of HIV services and strengthen health worker performance and engagement	Clinical Officers, Nurses, Assistants	PMTCT; ART retention in care; TB screening	% of HIV-positive pregnant women enrolled in ART increased from 81% to 100% % of exposed children under 18 months who received daily Cotrimoxazole prophylaxis increased from 12% to 95% Loss to follow-up was reduced from 7% to 1% % of patients screened for TB rose from 35% to 98%
Tanzania (6 council health management teams)	Strengthen district managers' performance in five management functions: health services quality improvement, supply mgt., district mgt. and planning, information mgt. and human resources mgt.	Council health management teams (CHMTs)	Management system improvements were not directly linked to any care area	% of participating CHMT members who felt they possessed even a low level of competency in basic improvement tasks from 0% to 75% % of supply orders processed within two weeks of receipt of order increased from 85% to 97% % of required reports submitted on time improved from 78% to 91% % of new staff who received a timely orientation increased from 53% to 69% % of staff at the district hospital who received an annual performance appraisal rose from 5% to 55%
Tanzania (5 villages in one district)	Strengthen community-facility linkages to improve referrals and reduce loss-to-follow-up	Home-based care volunteers	HIV testing, retention in ART	Over 7 months, out of 44 LTFU patients, 23 clients were brought back into care, 5 were determined to have relocated, 11 had died, leaving 5 as LTFU There was an increase in the number of people being regularly tested for HIV, and notably, an increase in the proportion of men seeking testing in all five villages
Mozambique (39 communities in the catchment areas of 3 health centers in one district)	Increase the number of pregnant women identified by the community who sought antenatal care (ANC) at the health center and who were tested for HIV	Community health workers	ANC, HIV testing in ANC	Community groups identified and referred over 2000 pregnant women to the 3 health centers over a 10-month period In one center, the % of community-identified pregnant women receiving ANC in the same month increased from 36% to 97%, and the % of first ANC visits between 10-20 weeks gestation increased from 54% to 73% However, the increase in pregnant women attending ANC overwhelmed the second health center, where the % of identified pregnant women receiving ANC in the same month fell from 87% to 57%. All three centers had consistently high rates of HIV testing and getting women found to be HIV-positive on treatment.
Uganda (10 villages in the catchment area of one hospital)	Improve the performance of VHTs in locating HIV patients who	Village Health Teams (VHTs) and expert patients	Mapping PLHIV in the villages, providing PLHIV with	The number of PLHIV mapped in the 10 communities increased from 15 to 767 All mapped patients were engaged in setting health goals and eventually developed self-management plans

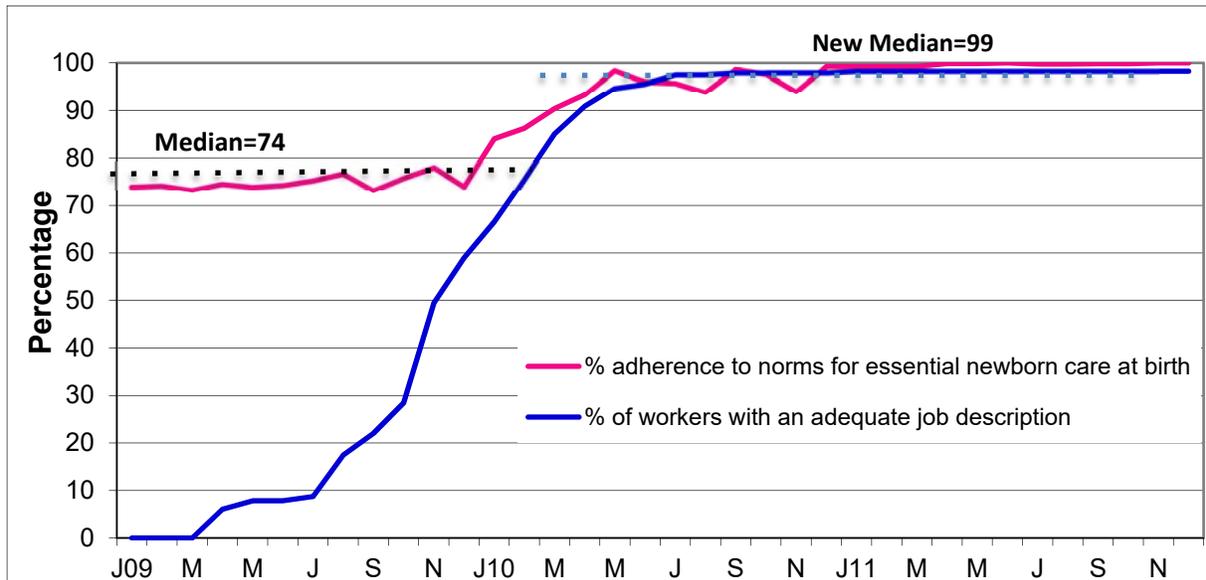
Country (No. of Sites)	Collaborative Objective	Types of HRH Involved	Services	Key Results
	were lost to follow-up		self-management support	
Uganda (14 facilities)	Address gaps in pharmacy workforce performance that potentially compromise HIV client outcomes by affecting ART adherence	Pharmacy assistants, nurses,	Timely ordering of ARVs, proper labeling and appropriate counseling for prescribed ARV, patient adherence to ARVs, and demonstrated clinical improvement	<p>Correct labeling of medicines dispensed improved from 38% vs. 83%, <math>p &lt; 0.0001</math></p> <p>Clients' ability to read the medicine label improved from 69% to 92%, <math>p &lt; 0.0001</math></p> <p>Clients' ability to explain how much, how often, and for how long medication should be taken improved, but not significantly (75% vs. 83%, <math>p = 0.2215</math>)</p> <p>More facilities had standard operating procedures in place (36% vs. 64%, <math>p = 0.1654</math>) and had responsibilities for all pharmacy personnel documents (27% vs. 64%, <math>p = 0.0660</math>), but the differences were not significant</p> <p>Facilities significantly improved correctly recording stock information about antiretroviral drugs (53% vs. 100%, <math>p &lt; 0.0001</math>).</p>

Collectively, these country experiences illustrate the potential for applying the following HRH management interventions to improve the quality and effectiveness of HIV services: task definition and alignment; task sharing and shifting; team-based performance management; strengthening district management functions; increasing health worker engagement; integrating HRH performance improvement with clinical care improvement; and mobilizing communities in the HIV response.

**Align and clarify tasks and roles:** HRH improvement interventions in Niger and Tanzania engaged facility-based teams and district management teams in analyzing the steps in key patient care processes to clearly define each staff member's role and responsibilities as they related to care goals. Using flow charts and task lists, these teams were able to identify redundancies as well as gaps and then develop more rational and comprehensive job descriptions and work plans for all team members that aligned with health care standards and program goals. Often this entailed redesigning tasks and jobs to improve communication/coordination between different types of providers, ensuring a more balanced distribution of tasks and simplifying work processes. For example, in Niger, clarifying tasks and job descriptions and streamlining work flow both supported improvements in compliance with essential newborn care standards, as shown in **Figure 1**.

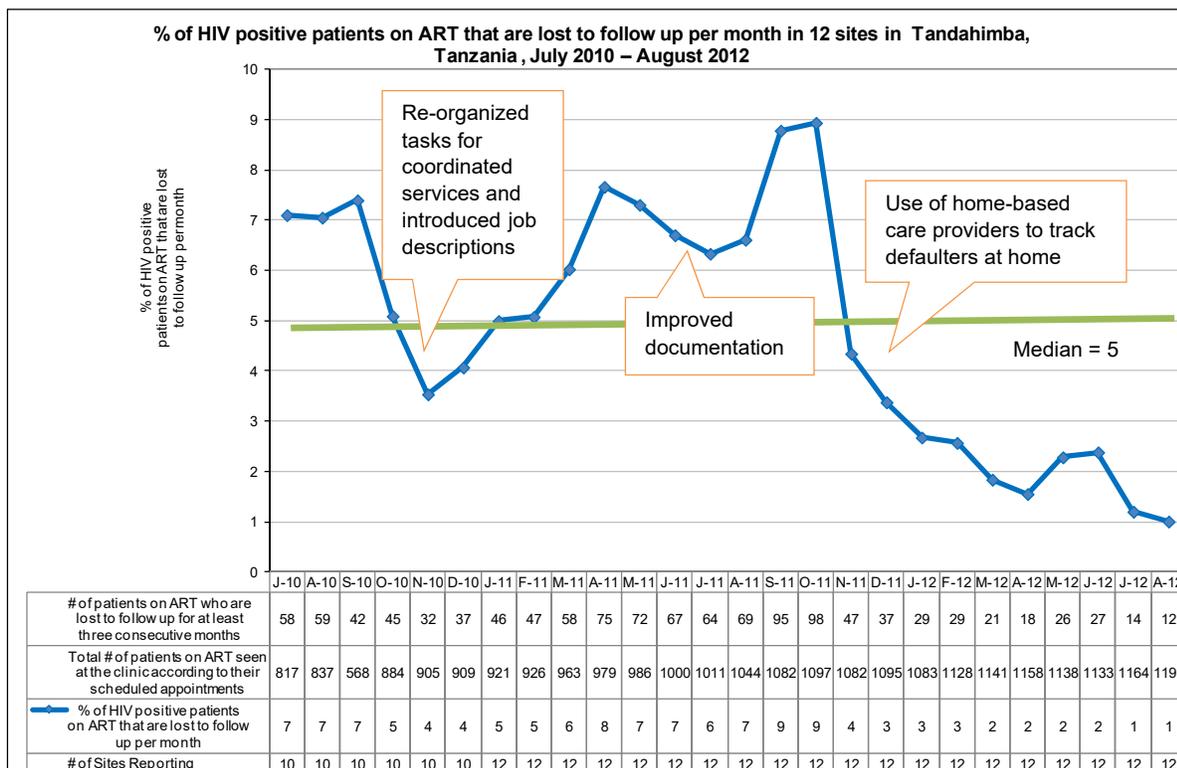
Health workers in Niger that were interviewed after the intervention made a direct connection between the rationalized and explicit allocation of tasks and better performance of clinical tasks. *"Describing positions and tasks has allowed us to avoid a lot of idleness and conflicts. Everyone feels responsible in coming to work in the morning and he knows what to do,"* said one health worker. Another noted, *"At the time when this came, none of us had a job description. When you came in the morning, you just said to yourself 'I think I'll do this task'. You do it yourself; you know generally what you had to do. Now, with the job descriptions, when you come to work you know what you need to do because the tasks are described here."*

**Figure 1: Adherence to Essential Newborn Care Norms and Existence of Adequate Job Descriptions, Niger HRH collaborative sites, January 2009–November 2011**



In Tanzania, the HRH collaborative in 12 facilities showed a reduction in patients on ART who were lost to follow-up for at least three consecutive months from 7% to 1% through a series of changes, beginning with task re-organization and introduction of job descriptions, followed by improved documentation and use of home-based care workers to track defaulters, as seen in **Figure 2**. These HRH interventions resulted in more efficient care—producing better results with the same resources.

**Figure 2: Percent of HIV-positive patients on ART that are lost to follow-up, 12 HRH collaborative sites, Tandahimba District, Tanzania**



**Task shifting/sharing:** Analyzing tasks also creates the opportunity to realign roles by assigning appropriate tasks to lower-level cadres (task shifting) and providing them with on-the-job mentoring and job aids to support them in fulfilling these new roles, as well as expanding the cadres that can perform a certain task. Such role expansion can be either a complete transfer of the task from one cadre to another (task shifting) or defining specific activities that different cadres can carry out jointly as part of a specific service (task sharing).

- In the Tanzania HRH collaborative in 12 sites, initially only the clinician conducted TB screening of HIV-positive patients. Since the clinician was already overloaded with tasks, teams decided to re-organize the process to assign TB screening to a nurse. Nurses were then required to assess all HIV patients who came to the clinic. Task shifting increased capacity to provide TB testing and counseling for patients already in HIV treatment or care programs. In addition to task shifting, the team improved the standard TB screening form to allow each patient's TB screening status to be tracked in a single form for 12 months. As a result, the proportion of HIV patients screened for TB rose from 35% in July 2010 to 98% in August 2012.
- In the same collaborative in Tanzania, task shifting also helped reduce client wait times, although high staff absences continued. In the three facilities where waiting time was measured, waiting times were reduced from 76 to 46 minutes as a result of changes in client flow and shifting of tasks among providers. More than 80% of health care workers interviewed at the intervention's endline reported reduced workloads; tasks were mostly shifted from higher level staff to those at lower levels. Task shifting also resulted in greater productivity in terms of the proportion of time spent each day on productive tasks (i.e., patient card, updating records, etc.) by cadres that were not fully occupied thus making more efficient use of the existing workforce. For example, medical attendants' productive time rose from 63% to 90%.
- In Uganda, due to the scarcity of pharmacists and pharmacy assistants, facility-based improvement teams reviewed pharmacy tasks and client flow for drug dispensing to determine what pharmacy tasks could be shared with other health cadres, including physicians, clinical officers, nurses, and midwives. As a result of other existing staff taking on pharmacy roles, the quality of drug dispensing improved, as measured by clients receiving the medication prescribed, more frequent patient instruction on medication use, and dispensed medicines being legibly labelled.

**Team-based performance management:** HRH collaboratives in Niger and Tanzania also addressed how health workers were managed and supervised by engaging facility teams in managing their own performance. In Niger, facility teams used job descriptions to identify staff knowledge and skill gaps and come up with ways for addressing those gaps within the facility, including developing plans for peer-based and self-directed learning to address competency gaps and on-the-job training and mentoring that helped teams meet their own competency development needs. Facility teams in Niger and Tanzania also used team meetings to provide each other with performance feedback and discuss client feedback. At district hospitals, these meetings were also attended by members of the hospital management team. Feedback addressed individual progress and performance relative to each individual's work plan. The teams used the meetings to discuss success, challenges, and how to improve performance on program indicators and to plan next steps. District teams also looked at ways to improve supervision practices, including use of performance checklists and observation of care delivery. In both Niger and Tanzania, district health management strengthening activities sought to implement system changes at the district level that would help facility teams to improve their performance and also build the capacity of district managers to support and coach improvement activities at the facility level.

**Strengthening district-level management functions:** One of the changes that proved effective in Tanzania was for district management teams to design a process for welcoming and onboarding new staff whenever they arrived. A member of the district management team would assign someone to introduce the new staff member to the rest of the facility's staff, orient the person to the facility's

processes and procedures, and facilitate meetings with relevant district officers. In addition, the district management teams set aside money from the budget to keep an apartment ready with essential necessities provided so new staff could immediately have a place to live. Finally, the districts also set aside a small stipend to allow the new arrivals to have spending money until their payroll status was confirmed, at which time they reimburse the advance from their paychecks. After implementing the orientation package the percentage of new staff that were retained at the facilities after six months increased from 69% in March 2011 to 97% in September 2013.

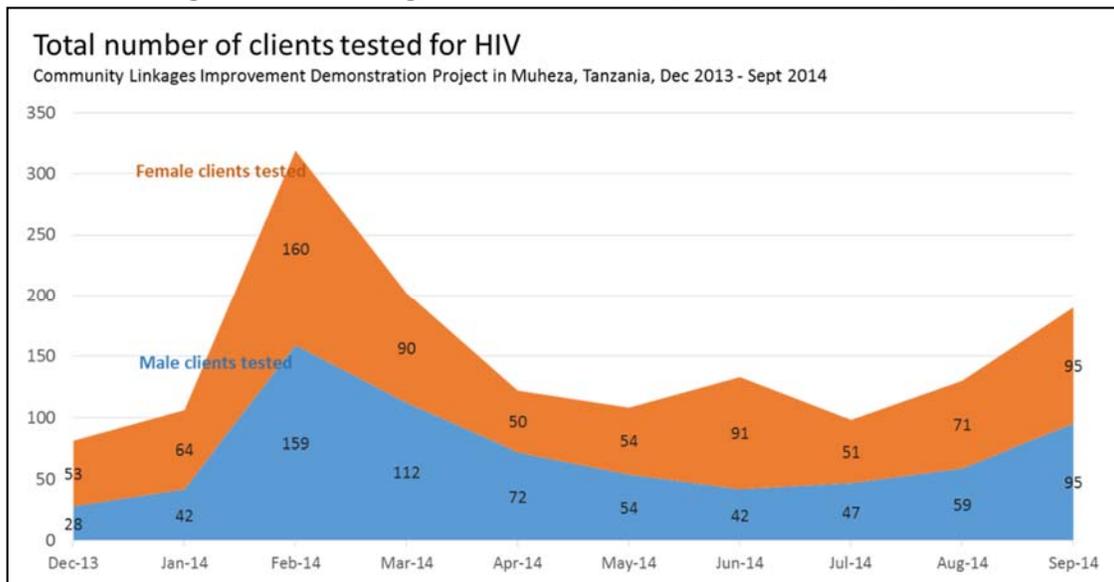
**Health worker engagement:** The USAID Health Care Improvement Project (HCI) tested several instruments to measure health worker engagement in order to relate changes in engagement to other measures of performance. Employee engagement was defined as “the individual’s involvement and satisfaction with as well as enthusiasm for work” (Harter et al. 2002). Initially, instruments used were based on the approach used by the Gallup organization among health care workers in developed countries. After applying the Gallup-based instrument in Niger, Uganda, and Tanzania, the project concluded that a more rigorous validation was needed of the concepts underlying health worker engagement, including the factors that promote or inhibit engagement. A large-scale, mixed methods study was implemented in Tanzania in 2013 to collect data at the individual health worker and health facility levels, involving 1329 interviews with staff at 183 health facilities drawn from six regions. The study found significant associations between having more support from the supervisor and higher levels of job satisfaction, being accountable, being a team player, and a higher likelihood of delivering equitable care. Having adequate work competences was shown to be positively associated with all engagement characteristics other than delivering equitable care. Among characteristics closely related to health worker engagement, the study found that being a team player had a significant impact on HIV care performance. Specifically, every 10% increase in the proportion of health workers who considered themselves team players was associated with 5 percentage points (95% CI: 2.3 to 7.3) increase in the proportion of HIV-infected patients screened for TB, adjusting for all covariates. The [validated tool for measuring health worker engagement](#) is available on the ASSIST website.

**Integration of HRH performance improvement with HIV care quality improvement:** The HRH HIV intervention in Mtwara Region of Tanzania linked HRH performance improvements with improvements in HIV clinical care. Improvement teams based in 12 high-volume facilities mapped and reviewed HIV processes of care and analyzed health worker tasks. Based on identified problems, teams reorganized the process of care, shifted tasks, and clarified task expectations which were then reflected in individual job descriptions and work plans linked to HIV care objectives. Between July 2010 and February 2012, the proportion of HIV clients assessed for active TB at every visit improved from 35% to 93%; the proportion of HIV-exposed children under 18 months receiving daily Cotrimoxazole prophylaxis increased from 13% to 100%; and the proportion of pregnant women who tested positive for HIV and were enrolled in care and treatment increased from 80% to 100%. All 57 health workers also had job descriptions compared to 2 at baseline, and 88% of staff said they were highly motivated compared to 67% at baseline. Based on the Tanzania and Niger HRH improvement work, the USAID ASSIST Project has made incorporation of human performance factors an integral part of clinical care improvement strategies in Burundi, Tanzania, and Uganda.

**Community-facility linkages and mobilizing communities in the HIV response:** PEPFAR supported HCI to develop a Community Health System Strengthening (CHSS) model that leverages formal and informal pre-existing groups and networks (such as village governments, religious groups, agricultural groups, ‘savings and credit’ groups, PLHIV groups, etc.) to support community health worker performance and community-facility linkages. Applying the CHSS model, representatives from each community group, representatives from the facilities, and delegates from local government, all came together to serve as a community improvement team for the purposes of identifying local HIV and health gaps to meet local needs and to develop and test strategies to bridge those gaps. The model has been applied to community-level HIV services in Ethiopia, Mozambique, Tanzania, and Uganda.

- In Ethiopia, the community health system strengthening approach led to a five-fold increase in the identification of pregnant women. One community improvement team increased the percentage of pregnant women attending health posts for ANC services from 33% to 88 % in three months. The changes that led to improvement were members of the community groups encouraging family members and mobilization of community funeral cooperatives and other community groups as well as teachers to encourage pregnant women to go to the health post for ANC.
- In Mozambique, the community health system strengthening model was adapted successfully to the local context to engage neighborhood groups in helping support the work of health facility staff and community health workers (*activistas*) and resulted in more pregnant women being connected with care and starting ANC earlier in pregnancy. Each neighborhood group agreed to set aside time during their regular meetings to discuss health issues and also gathered the names of their family and neighbors who were pregnant and brought that information to the community committee, which subsequently passed it to the health center committee and nurse. The nurse would determine which of these pregnant women had and had not been to ANC and would discuss with the health committee members the gaps and strategies for encouraging women to come to the facility. Health committee members would share this information back down the chain, and neighborhood committees would find ways to encourage women to go to ANC. They found that one of the most effective strategies was targeting messages to mothers-in-law, since many of the men were working in mines in South Africa. They also used different strategies for following up with women who did not attend ANC based on the particular family, including asking the *activista*, religious leaders, community leaders, or other community group members to meet with her. Setting up a clear process for information exchange and a two-way feedback loop through the neighborhood and health center committees were essential to understanding the actual situation in the community and potential ways that barriers could be overcome.
- In Tanzania, ASSIST used the Community Health System Strengthening model to engage community groups in five villages in Muheza District to support the work of home-based care (HBC) providers to increase the uptake of HIV testing. By engaging group members in talking with their associates and families about getting tested for HIV, the villages saw a jump in HIV testing, especially among males who had not previously been tested (**Figure 3**).

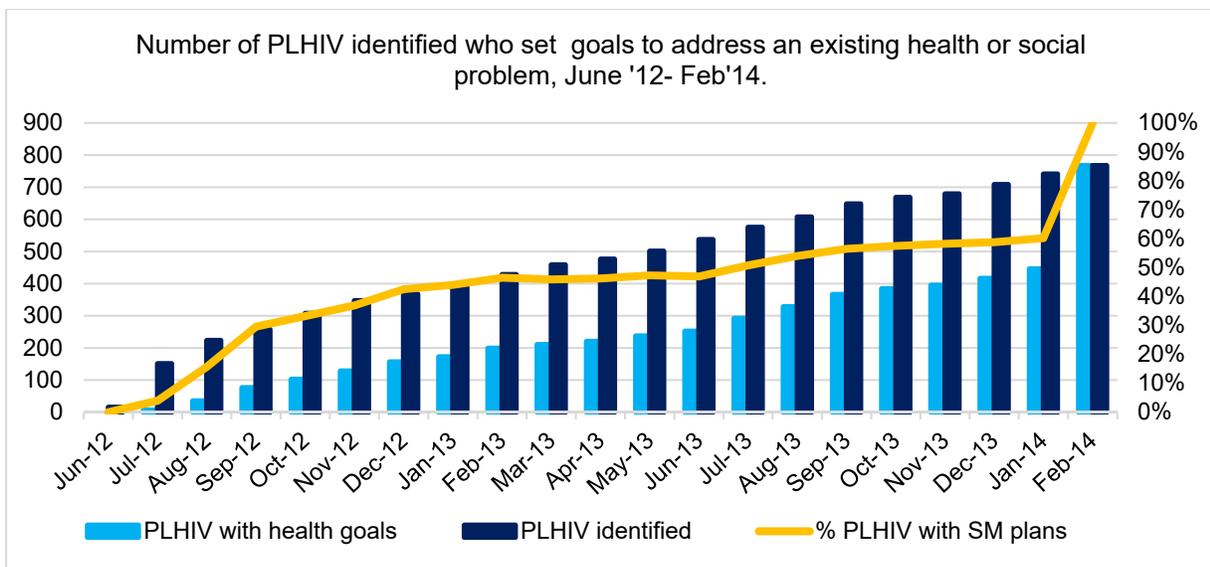
**Figure 3. HIV testing in five communities, Muheza District, Tanzania**



- The community system approach also helped reduced the number of HIV patients who were lost to follow-up. While the HBC volunteers in Tanzania existed before, the community system and improvement approach helped them become more functional and connected throughout the community. The HBC volunteers and PLHIV groups obtained contact information and address of clients and treatment supporters (telephone number, village, and ward) from the health facility. The HBC volunteers paid home visits to households with lost clients and to those with special needs. PLHIV group members helped HBC volunteers trace those lost to follow-up (LTFU) and update clients' contact information. Names and identifying details on those who were lost to follow-up were limited to the HBC volunteer and PLHIV peer groups to protect the privacy of community members with HIV. Over 7 months, out of 44 individuals ever lost to follow-up, 23 clients were brought back into care, 5 were determined to have relocated, 11 had died, and only 5 were still lost to follow-up.
- In Uganda, the CHSS model was used to improve Village Health Team (VHT) performance and self-management support for HIV patients by enabling the VHTs to identify more HIV patients wanting support and assist them to address health or social issues. Goal-setting by PLHIV supported in the community increased from 28% to 100%, as seen in **Figure 4**.

These examples show that by engaging the existing structures in the community, more people can be reached effectively with HIV services than by community health providers working on their own.

**Figure 4: Self-management support for PLHIV in the community, Uganda, 10 villages in catchment area of Buikwe Hospital**



## Key Learning about Improving the Performance of HIV HRH

- **Building the capacity of health workers to manage their own performance and routinely monitor quality of care is a feasible, immediate intervention for addressing HRH performance gaps impacting HIV service delivery.** Engaging health workers in clarifying their own work processes and in defining performance expectations made health worker teams more accountable for results and led to identification of locally feasible ways to improve work processes. Health providers delivering facility-based HIV prevention and care were able to improve quality fairly rapidly with an improvement approach that engaged them in analyzing and acting on gaps in compliance with HIV standards. Many changes can be made with existing resources and in a short time frame once providers are engaged in the improvement process.

- **Addressing factors influencing HRH performance and productivity alongside clinical care enhances service delivery results:** Significant improvements in service delivery can be attained alongside improvements in human resources management and health worker engagement when factors affecting performance are addressed as part of the improvement work. Addressing performance factors as part of an improvement approach empowered health workers to manage and improve their own performance by rationalizing and clarifying individual roles and tasks and addressing competency gaps. Performance factors that can be readily addressed in low-resource settings include unclear roles and tasks, ineffective or inefficient processes of work, lack of feedback, lack of competence to perform processes of work, and an inadequate working environment.
- **Improving the engagement of existing health worker teams in their work and in taking responsibility to provide the best quality of care to patients makes a difference in care quality.** The study in Tanzania found that health worker engagement was increased by supervisor support and perceived adequacy of health workers' own competencies to perform their tasks. Qualitative data indicated in addition to support from one's supervisor, feedback and praise from colleagues and patients impacted engagement. Importantly, perceived adequacy of resources was not found to influence engagement, yet was raised in interviews as contributing to job dissatisfaction. These findings suggest that increasing health worker engagement within service delivery programming is a key intervention opportunity for strengthening HRH performance.
- **Applying QI at the community level with engagement of community stakeholders can increase the reach and productivity of community health workers (CHWs):** A key concern of CHW programs and CHW program investments is the productivity and performance of CHWs. CHWs are frequently unable to provide services to all households due to expanding and unmanageable workloads. Communities have their own indigenous structures and systems by which community members share information, make decisions, and work together. CHW performance and productivity can be enhanced by strengthening the interface between CHWs, the community's own systems, and formal health systems – leveraging existing systems to disseminate and gather health information, and identify and refer community members that need care.

## Conclusion

Reaching the 90-90-90 targets of helping people learn their HIV status, linking HIV-positive people immediately to life-saving treatment through Test and Start, and achieving viral suppression through better patient engagement and retention in care will require approaches that can help countries do more with existing resources by increasing the impact and efficiency of their HIV investments, especially in human resources. Improvement methods have demonstrated results in terms of improved health worker performance and quality of care. Program managers and policymakers should consider these approaches to support PEPFAR 3.0's impact, efficiency, and sustainability agendas.

The impact agenda is served by interventions to increase health worker performance (aligning tasks and program objectives and team-based performance management) and engagement (supervisor support and feedback), strengthen health worker competencies at the site level (peer mentoring), improve the quality of in-service training (coordination and rationalization of training activities), and, in the case of community-level services, extending the reach of CHWs (engaging community groups).

The efficiency agenda is served by interventions that have been shown to optimize the existing HIV care workforce and better utilize existing resources through task shifting/sharing and job/task analysis and redesign to streamline tasks and reduce duplication and non-productive time.

The sustainability agenda is served by activities that strengthen the capacity of government staff at the district and facility levels to support facility-level quality and health worker performance improvement, including strategies that increase the improvement skills of district managers and that engage existing community resources in improving care quality and linkage and retention of HIV patients in care.

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University Research Co., LLC  
7200 Wisconsin Avenue, Suite 600  
Bethesda, MD 20814

Tel: (301) 654-8338

Fax: (301) 941-8427

[www.usaidassist.org](http://www.usaidassist.org)