Elizabeth Glaser Pediatric AIDS Foundation

Until no child has AIDS.

HABA NA HABA

TECHNICAL BULLETIN ▪ JUNE 2017

MAXIMIZING THE IMPACT OF PROGRAMS TO PREVENT AND TREAT HIV AND AIDS THROUGH QUALITY IMPROVEMENT

All Photos: Eric Bond/EGPAF, 2017

Welcome to *Haba Na Haba*!

This publication provides a dynamic forum for the routine sharing of technical information and promising practices with our fellow colleagues and extended family of partners and like-minded organizations around the world. Each issue of Haba Na Haba highlights a topic of particular importance to the Elizabeth Glaser Pediatric AIDS Foundation (EGPAF). The topic highlighted in this issue is Quality Improvement in HIV and AIDS Programs.

What Does *Haba Na Haba* Mean?

The name of the bulletin, *Haba Na Haba* ("little by little"), is borrowed from the Swahili proverb *haba na haba, hujaza kibaba* ("little by little fills the pot") and was chosen to reflect the often incremental nature of progress in our field. As the experiences described on the following pages demonstrate, the smaller efforts of every one of us are the essential "ingredients" for mounting a strong and united global response to HIV and AIDS.

Feedback is welcomed from all readers, and contributions are accepted from all EGPAF staff. Please send your questions, comments, or content submissions to publications@pedaids.org

FEATURE ARTICLE

MAXIMIZING THE IMPACT OF PROGRAMS TO PREVENT AND TREAT HIV AND AIDS THROUGH QUALITY IMPROVEMENT

In sub-Saharan Africa, an estimated 25 million people are living with HIV and AIDS.[1] The Elizabeth Glaser Pediatric AIDS Foundation is the global leader in the fight to end HIV and AIDS in children. Since our inception, EGPAF has helped achieve a 95% decline in new HIV infections among children in the United States, and a 70% decline in the number of new pediatric infections worldwide.[1]

The elimination of pediatric HIV and AIDS is within our reach, and through comprehensive health service delivery, advocacy, operations, and clinical research within 19 supported countries, EGPAF is approaching this goal. EGPAF operates in regions of the world most affected by HIV and AIDS and has a global footprint reaching nearly 6,000 health facilities across sub-Saharan Africa. We work together with existing local governments and partners to scale-up quality programs and services that are locally-owned. Our programs reach more than 2.5 million pregnant women and families, each year, and support treatment of over 900,000 adults and children with HIV infection.[2] However, with only 57% of people living with HIV and AIDS in sub-Saharan Africa aware of their status and only 46% of people living with HIV on antiretroviral therapy (ART), new interventions must be introduced to scale-up the number of patients who are diagnosed, in care, and who have achieved an undetectable viral load.[3]

To ensure that all individuals have access to care, we must effectively serve the communities most in need of health systems support. Supported services should be integrated, quality-oriented, and people-centered. In the majority of EGPAF-supported countries, HIV/AIDS services can improve their organization and management; increase the human resources available to provide quality services; reduce long waiting times for clients; and be more responsive to people's cultural, ethnic, or financial preferences. Quality improvement (QI) systems and processes can help ministries of health and partners meet these requirements—providing not only outstanding health programs and services, but also a positive customer experience with enhanced resource efficiency. Incorporating QI into national health care strategies is a prudent approach to cost savings, while increasing positive health outcomes for a population. There is strong evidence that QI can contribute to improved coverage of prevention of mother-to-child HIV transmission (PMTCT) programs,[4,5,6] resulting in declines in rates of mother-to-child transmission of HIV and improved uptake and retention in care—key program areas for EGPAF.

At EGPAF, we implement an expansive form of QI that focuses not only on health services, but also on program development, operations support, and organizational effectiveness. In this issue of Haba Na Haba, EGPAF presents lessons learned and promising practices in QI implementation to date, discusses what is needed in order to scale-up QI in countries and communities,[7] and highlights system and program improvements which have resulted from QI initiatives. As this issue showcases, QI can be a key driver in increasing program efficiency, attaining universal health coverage for HIV, achieving the UNAIDS 90-90-90 targets*, and establishing effective models of care that are tailored to the needs of individuals and communities.[3]

What is QI?

Over the past three decades, high-income countries have invested in methodologies to improve the quality of health service delivery. These methodologies, collectively known as QI, are rapidly expanding across African health care systems.[8] QI is a management approach that involves the combined efforts of a variety of stakeholders—program implementers and partners (including government agencies), health care workers, educators, and clients and their families—to make changes that will lead to better programs and systems, and ultimately better patient health outcomes. The key strategy behind QI lies in bringing teams together to recognize gaps and test a few small changes at a time.[9] QI is grounded in *improvement science*—striving to understand how systems work and how people are responding to these systems, promoting organizational change, providing for adult learning, and tapping into local knowledge.[10]

QI interventions are complex and multifaceted, encompassing both programmatic and social components. Improvements require changing the way we work and what we assume is and is not working. To truly improve health care delivery, one must understand complex systems and processes to know where the gaps are and how to address them. This requires analysis of existing data (both quantitative and qualitative) and using that data to effect change.

QI at EGPAF

EGPAF aims to expand high-quality, locally-owned HIV/AIDS services and strengthen health systems to end new HIV infections in children. In line with this goal, and the U.S President's Emergency Plan for AIDS Relief's (PEPFAR) Quality Strategy,[11] over the last 10 years, EGPAF has prioritized QI and built a global platform to introduce and scale-up QI approaches in supported countries. The EGPAF QI platform began with global leadership support and was launched through the development of a specialized team within a strategic information and evaluation (SI&E) unit.

Components Key to EGPAF's QI Growth
A global strategy, upon which country strategies were developed
A comprehensive QI training toolkit for all levels of health care
Nonresearch determination clearance and ministry of health support
Staff responsible for QI at global level and within countries
Processes to develop and support QI teams at sites
Tools for QI implementation and reporting at the site level

Launching a QI Framework

The Program Optimization and Service Quality Improvement (POSQI) unit was created as a subunit of the SI&E team. Its key functions are to improve technical and operational program and service delivery design, implementation, quality, and impact through a proven and sustainable quality management approach that continuously assesses and improves services and patient outcomes. The POSQI unit developed a framework to scale-up QI throughout EGPAF's many country programs by:

1. Prioritizing a culture of continuous

* Globally-recognized treatment targets calling for 90% of individuals knowing their HIV status; 90% of those infected with HIV enrolled on treatment; and 90% of those on treatment experiencing viral suppression by 2020.

quality assessment and improvement across all programs and fostering the same culture at multiple ministry of health levels and among partners through:

a. Facilitating active involvement of all program staff, ministry staff, partner staff, and consumers in QI through trainings and development of tools to easily apply QI

b. Ensuring that QI activities are routinely conducted and evaluated

2. Implementing an infrastructure that supports good program quality, including activities to define, measure, and improve patient health outcomes. This infrastructure was established by:

a. Developing standards of care and services for PMTCT, HIV care and treatment, maternal and child health, HIV/tuberculosis (TB), laboratory services, and community linkages, and distributing and explaining these standards at facilities to promote increased access to care for children, mothers, and their families

b. Ensuring a process for involving consumers in improving the quality of services

c. Implementing a system for continuous data use to define program / service / health care gaps and deficits, and action items to address these gaps

Scaling up Health Facility-Focused QI in Supported Countries

EGPAF currently supports QI activities in 14 countries: Rwanda, Uganda, Mozambique, Tanzania, Lesotho, Zambia, Zimbabwe, Kenya, Côte d'Ivoire, Cameroon, the Democratic Republic of Congo, Malawi, Swaziland, and India (See Figure 1). These activities have been guided by support from the POSQI team and have been implemented using several approaches, including employing Plan-Do-Study-Act (PSDA) cycles, which are used to test small changes to improve health service functioning; the use of a collaborative model approach to ensure that problems are identified and solutions shared across facilities and regions; and implementing technological innovations to monitor the needs and progress of countries and inform global implementation of best practices.

Key QI Tools for EGPAF Programs

- Flowcharts
- Brainstorming tools
- Client focus groups
- Cause-and-effect diagrams
- Root-cause analysis
- Prioritization matrices
- Pareto charts
- Bar charts
- Run charts
- Standard QI reporting templates

Data: The Platform for Improvement

The POSQI team first focused on providing service-level support to districts and health facilities and has since created a wider approach that encompasses programmatic and operations quality monitoring and improvement. Much of the facility-focused support, to date, has been informed by the use of tools such as the Easy-Quality Improvement tool, which measures indicators that represent the quality of HIV care for clients, and the QI Project Monitoring tool, which tracks site QI projects. The use of these tools enables EGPAF not only to monitor and track QI projects across countries, but also spread and document promising practices from site to site, district to district, and country to country.

14 QI-implementing countries

Nine countries with dedicated leads working with more than **50 QI-dedicated staff**

QI in over **90% of EGPAF supported regions and districts**

QI activities in over **40% of our sites**

Over 900 sites with established QI teams with **almost 1,900** completed or active QI projects

FIGURE 1. Status of QI Implementation at EGPAF, May 2017

FIGURE 2 The PDSA cycle[13]

Plan-Do-Study-Act

EGPAF adopted the PDSA approach (Figure 2), which is best suited to the continuous improvement of health services to patients. The PDSA[12] provides a framework for developing, testing, and implementing changes. It is used for action-oriented learning and incorporates testing a small change in a real setting—by planning, implementing, observing results, and then acting on what is learned.

The framework involves evaluating the responses to three key questions meant to ensure that teams identify effective changes:

- **What are we trying to accomplish?** A QI team's response to this question helps clarify targets and desired results.
- **How will we know that a change represents an improvement?** Actual improvement can only be proven through measurement of an outcome (data) that demonstrates movement toward the desired result.
- **What changes will result in improvement?** Effective changes need to be identified prior to full implementation.

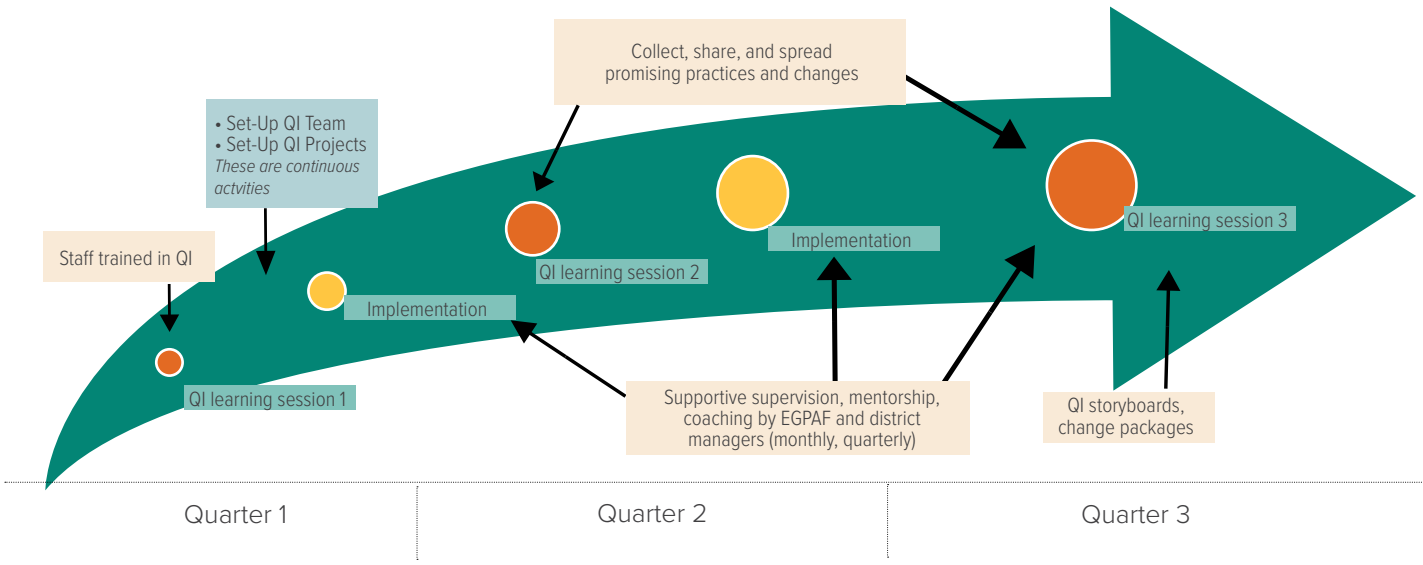

FIGURE 3 EGPAF QI collaborative model for providers (adapted from IHI Breakthrough Series Collaborative Model, 2003)

Improvement Collaboratives

EGPAF also employs improvement collaboratives—an effective[14] strategy that organizes a large number of health sites to work together for a time-bound period (typically 12 to 24 months) to achieve significant improvements toward a common aim. This methodology brings together health service staff members from different cadres, health sites and/or communities to resolve challenges,[15] motivate each other, and share and document promising practices (Figure 3). It has shown significant results across the HIV/AIDS sector in many sub-Saharan countries (an example of this approach used in Malawi can be found on page 12).[16]

Involving Clients in Service Delivery

The consumer's perspective is an essential element of responsive health systems programming. The degree to which health systems meet the needs and expectations of the consumer is an important determinant of initial or repeated uptake, compliance/adherence, and retention across the continuum of services. *Enhancing the Patient's Voice in Quality Improvement (EVPQI)* is an EGPAF consumer involvement model that enables the Foundation to know and successfully address patients' needs. A key advantage of this model is that it can be integrated into routine program implementation provided the necessary donor and local approvals are obtained (an example of this approach used in Tanzania can be found on page 18).

Obtaining Real-Time Data: Essential To A Multicountry QI Initiative

By harnessing technology and using electronic solutions, EGPAF's QI program is able to improve the accuracy of data, increase the speed at which technical assistance and feedback are provided by our staff to health facilities, and improve planning and resourcing. In 2017, EGPAF will be launching a mobile solution—which can be used on smartphones and tablets—to collect and track QI data. This will not only further enable frontline EGPAF staff to support QI activities more efficiently from the field, or managers to more quickly provide technical expertise in near real time, but will also allow health care workers to self-report on their QI work in the future. Having the ability to collect, store, and visualize data right at the facilities will drive participatory evidence-based decision-making between EGPAF, district managers, health care workers, and clients (Figure 4).

FIGURE 4. EGPAF uses Microsoft Power BI software to monitor, visualize and analyze QI data

Scaling Up QI to Program and Global Levels: The Program Optimization Approach

Noting effects of QI on health service delivery over the last decade, EGPAF has broadened the scope of QI using what is referred to as the Program Optimization Approach (POA).

POA specifically emphasizes integrating program assessments, evaluations, and data use with an overall focus on broader program improvement, which extends well beyond the typical focus on facility-level issues. Its objectives are to standardize process for continuous improvement of programs, operations, and service implementation; maximize and measure the impact of programs and services; and generate an evidence base for innovation and dissemination (Figure 5). POA has been adopted by EGPAF, globally, and is in the early stages of implementation at country-level.

To date, EGPAF has established a global POA Oversight Committee (G-POC) to provide overall direction. The G-POC defines EGPAF-wide optimization priorities, which over the past year have included optimizing direct service delivery and technical assistance, as well as relationships between operations and programs; generating and utilizing real-time, patient-level longitudinal program data to measure intervention outcomes; conducting expenditure analyses for clients served and output delivered and identifying cost-reduction opportunities; and optimizing enrollment, adherence, and retention of HIV-positive pregnant women, children, and adolescents (particularly young girls) in HIV/AIDS prevention and treatment cascades. Ten EGPAF country programs have taken significant steps to pilot and adopt POA in the past two years (Figure 6).

EGPAF will use this approach to continuously study and enhance existing good practices and incorporate new learning into the organization — accelerating progress towards our mission of ending pediatric HIV/AIDS.

FIGURE 5 POA implementation framework

Côte d'Ivoire

Transition and Sustainability

Using POA to explore possibilities of building capacity of district ministry staff as part of sustainability/transition plan; Support and actively participate in joint supervision organized by Regional/District Health Management Teams (R/DHMTs); organize orientation sessions by health region with the R/DHMTs on the transition and ownership of activities by governmental entities; and negotiate the integration of Site Improvement Monitoring System (SIMS) into supervision tools.

Opportunity to improve TB program using POA

Conducting a review of the TB program cascade to validate data and processes and therefore identify and address existing gaps.

POA bringing projects together

Two key project teams in the country are capitalizing on synergies by analyzing and addressing common indicators (e.g. partner testing, follow-up of mother-baby pairs, retention of patients in HIV care, etc.) together using POA.

Uganda

Differentiated Service Delivery (DSD): early learning

Used QI to learn from early stages of DSD roll-out through a guided learning session and health care worker satisfaction survey. Of the 48 respondents, 98% and 96% reported understanding their particular DSD model(s) and that DSD met their needs, respectively. However, 15% reported not having adequate time with clients and 17% reported not having sufficient equipment/tools, to meet the needs of their DSD model(s). The EGPAF-Uganda DSD technical working group used these findings to problem-solve both during the learning session, and at site levels.

Optimizing the CDC DELTA project

Optimization approach to improve data use at district level. A rapid situational analysis conducted in 2017; data analysis currently ongoing.

Tanzania

Health Systems Strengthening

Embarking on a POA project to optimize accountability of district health managers. A costing component will evaluate EGPAF's investment in capacity-building and performance outcomes.

Intersection of QI and research

Evaluation team to explore home-based family index HIV testing in order to determine if home-based testing is more effective - both in yield and cost - than facility-based testing.

Malawi

Staff retention

Operations and human resources teams conducted root cause analyses of existing staff retention challenges. Team is finalizing data analysis and initiated interventions to address changes in May 2017

Seeking source of success

A multi-disciplinary team working on evaluating impact of various initiatives on their successful early infant HIV diagnosis and testing program.

FIGURE 6 Overview of POA progress in select countries, June 2017

Lessons learned in QI implementation and sustaining gains

What we have seen at EGPAF—in line with the literature on the spread of innovation[18]—is that we crossed the tipping point for adoption of QI as a trusted strategy for rapid program and service delivery improvements in 2014, when the PEPFAR Quality Strategy was released. The country examples featured in this issue will highlight the effects of QI on service delivery and on program implementation globally at EGPAF (highlights of lessons learned from these countries is available in Feature Sidebar on page 10).

There is now greater awareness, among donors and partners, of the potential of QI to reverse the AIDS epidemic. As more people living with HIV are identified early and promptly initiated and retained on treatment, globally, we will see a more stable cohort of virologically suppressed patients.[17] This will necessitate a focus on differentiated service delivery that provides long-term quality care to patients. In order to achieve the 90-90-90 targets by 2020, it is critical that countries and partners scale-up promising practices that streamline care and are more person-centered. To virtually end AIDS by 2030, a collective investment must take place now, using our most effective strategies and tools—one of the strongest of which is QI.

Lessons Leaned Featured in Country Articles

Recognizing a national challenge of testing HIV-exposed infants at 2, 12, and 24 months of age, **EGPAF-Malawi** introduced the Collaborative Model in 78 facilities and scaled up use of facility-based QI teams. These teams developed and shared various promising practices including use of a revised standard operating procedures and tracking tools, and employment of community health workers. Through this initiative, improvements were seen in HIV testing of HIV-exposed infants at 2, 12, and 24 months of age. See page 12.

Swaziland's Ministry of Health identified a serious national gap in retention of clients on treatment (noting a national loss to follow-up and mortality rate of 17%-25%) and worked with EGPAF to address the issue. **EGPAF-Swaziland** scaled-up use of facility QI teams to test small changes, which included use of peer mentors and educational sessions on the importance of ART adherence. These changes led to an overall increase in treatment retention from 87% to 94%. See page 16.

From 2013 to 2015, **EGPAF-Tanzania** worked in collaboration with facility-based and district health management QI teams to introduce a Consumer Voice program in 25 health facilities. The program involved dialogues where community members, community and facility health workers, and regional program implementers could share experiences of navigating the health care system. These dialogues informed improvements in staff and client behavior, maternity ward services, efficiency in client flow, and access to counselling and treatment. The program led to overall improved client satisfaction. See page 18.

EGPAF-Zimbabwe worked extensively with the country's Ministry of Health and Child Care (MOHCC) to set-up QI teams in 312 sites in 2016. These teams tested small changes and used collaborative approaches to enhance use of HIV services. The QI activities resulted in a larger number of women HIV tested and retested in pregnancy, a growth in the number of children identified as HIV-positive, and greater access to treatment. See page 22.

EGPAF-Cameroon used a QI analysis and informed changes, which included both health worker capacity-building and infrastructure improvements to increase the number of HIV-positive children identified and linked to care and treatment in four pediatric treatment centers. See page 24.

EGPAF-Democratic Republic of Congo used POA to enhance financial systems and to create a greater understanding of up-to-date human resources policies. See page 26.

EGPAF-Côte d'Ivoire used QI to launch three key strategies to target better retention in HIV care and treatment, maternal and child health and PMTCT services. These interventions, combined with QI teams use of revised tools and tracking mechanisms, allowed for greater adherence to ART among supported clients. See page 28.

EGPAF-Lesotho supported program performance improvement officers, a cadre assigned to strengthen health systems, to use QI methodologies to monitor the quality of HIV and TB services provided at supported facilities and test changes which would result in strengthened services at 17 underperforming health facilities. The changes implemented, which included revision to tracking tools, use of appointment books/diaries, training health staff and launching educations sessions for clients, led to improved health service delivery at all 17 sites. See page 32.

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IN MALAWI…

Using QI To Improve EID And Pediatric Care And Treatment

EGPAF-supported regions

EGPAF began collaborating with local partners in 2001 to initiate one of Malawi's first programs to provide PMTCT services. Currently, EGPAF–Malawi provides technical assistance in adult and pediatric HIV prevention, care, and treatment services to more than 150 Malawian Ministry of Health (MOH) and faith-based facilities, including 78 priority sites, district-level health teams, and community-based organizations.

The Malawi rate of mother-to-child transmission of HIV, at breastfeeding cessation was at 9% in 2015.[1] The national PMTCT program calls for early infant HIV diagnosis (EID) testing at 2, 12, and 24 months of age among all HIV-exposed infants, and linkages to care and treatment among those with a positive result. As of March 2015, testing at 2 months was at 37% among HIV-exposed infants, nationally. Even after many interventions to enhance infant testing, the country is still behind in meeting EID testing targets. Innovative and informed solutions are needed to make important changes in infant testing rates in Malawi.

EGPAF-Malawi QI Collaborative Model

EGPAF introduced the QI Collaborative Model in May 2015 across 78 health facilities in seven districts.[2,3] This model involved training health facility staff to become "QI champions," formation of multidisciplinary QI teams to function at all 78 sites, and

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coordination of monthly multi-facility QI meetings to review data and develop and monitor QI projects. Each facility presented at least one active QI project during quarterly data review meetings. These sessions sometimes involved dividing participants / clinic attendees into groups according to the type of indicator they were addressing. The process of creating QI-based projects involved QI teams identifying root causes and developing plans with a series of chart templates to track progress.

The eclectic groups comprising different staff members from various locations shared information and experiences and worked together to design effective solutions. EGPAF provided ongoing technical assistance through site mentorship and provision of tools. Of the 78 sites, 54 (69%) implemented QI projects focused on improving EID.

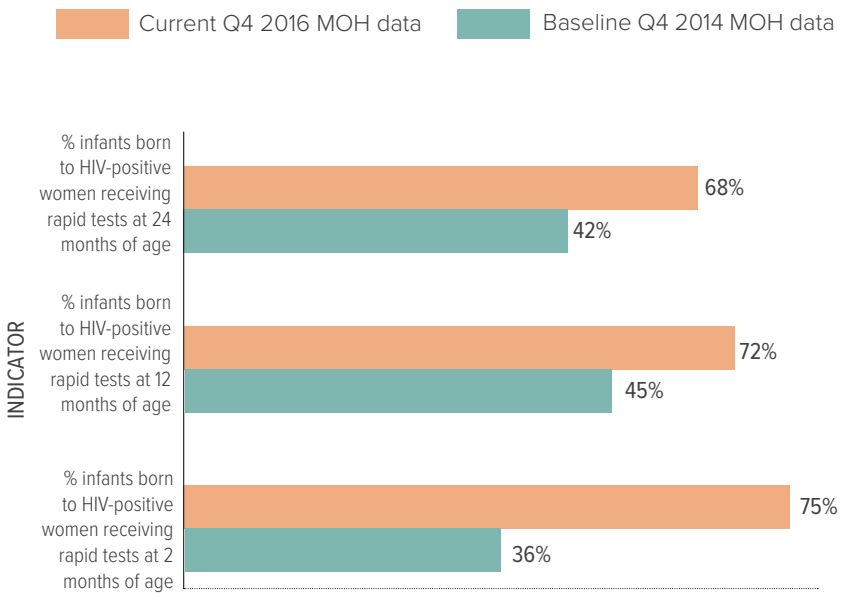

FIGURE 7 Performance of EID indicators at 2-, 12-, and 24-month HIV testing in 78 EGPAF-supported facilities

QI Interventions

Collectively, 128 interventions specifically addressing EID and pediatric care and treatment emerged from this collaborative approach. Due to the common challenge of HIV-exposed infants being lost to follow-up (LTFU), interventions were centered primarily on systems and staff, patient, and community involvement domains related to LTFU rates among children infected with HIV. The EGPAF and MOH teams, together with site QI teams, identified practices from the 128 interventions that appeared to show a significant contribution to EID improvement:

- Facility health care providers developed health education standard operating procedures for caregivers, underlining the importance of EID.
- Facility QI teams offered appointment reminders for HIV testing to each client/caregiver in advance of their upcoming visit.
- Facility QI teams modified the PMTCT appointment register to add columns for better patient tracking.
- Facility QI teams developed rapid test registers used by providers testing infants at 12 and 24 months.
- Health providers worked with community health officers to follow HIV-exposed infants due for HIV testing by providing home-based counseling.
- EGPAF officers began logging into laboratory information management systems to obtain electronic results of infant tests and informed facility staff via phone or SMS, expediting the delivery of results.
- Nurses and expert clients synchronized mother and HIV-exposed infant appointment dates at the facilities.

EID Program Outcomes

The program noted significant improvements in service delivery outcomes from QI interventions. MOH data from EGPAF-supported facilities show the percentage of infants born to HIV-positive mothers receiving a polymerase chain reaction (PCR) HIV test at 2 months of age increased from 36% (260 out of 728) before implementation of QI (October–December 2014) to 75% (787 out of 1,056) by October–December 2016.[4] In the same time period, the percentage of infants born to HIV-positive women who received rapid testing at 12 months of age increased from 45% (347 out of 767) to 72% (830 out of 1,160), and the percentage of HIV-exposed infants receiving HIV rapid testing at 24 months of age increased from 43% (325 out of 758) to 68% (699 out of 1,033).

Lessons Learned

QI has significantly improved EID outcomes through small changes that require minimal resources. The QI model involves regular data review meetings and QI monitoring, which enhance knowledge sharing among staff and ensure teamwork and rapid adoption of best practices across sites. The meetings allow for buy-in from the MOH district health teams, which enhance local ownership.

This model has been integrated into routine program monitoring and is assessed at quarterly district review meetings with district health management teams. EGPAF–Malawi will expand the model to address other challenging program areas, for example, viral load monitoring and treatment retention, and is using POA to integrate these results into program design and strategy for further scale-up in other supported country programs.

ACS, UNITAID regions

AIDSFree, ELMA regions

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In Swaziland…

Strengthened Patient Follow-Up Among Pre-ART/ART Clients At Dvokolwako Health Centre In Swaziland

EGPAF supports the Kingdom of Swaziland's MOH in planning, implementing, and evaluating programs according to patterns of the HIV epidemic throughout the country. EGPAF–Swaziland provides support to improve local infrastructure for service delivery and works to strengthen health systems through training, mentorship, and procurement of essential HIV drugs and commodities. We also work to increase community engagement in PMTCT and EID. Currently, EGPAF–Swaziland supports 66 health facilities in Hhohho and Shiselweni with PMTCT, HIV testing and counseling, ART, and TB services.

Background

Swaziland's HIV/AIDS program has clearly outlined mechanisms for following patients enrolled on ART. Nevertheless, the number of patients LTFU, defaulting, and missing their appointments and drug refills remains high. A retrospective cohort study conducted in 2008 found that about 17% of patients were LTFU or dead, and some health facilities were experiencing LTFU rates of up to 25%.[5]

EGPAF, in collaboration with the quality assurance and QI unit of the MOH, supported health facilities' efforts to strengthen the tracing of ART patients who miss their appointments, default, and/or are LTFU. Dvokolwako Health Centre is one of these supported facilities. This center, located in the Hhohho Region of Swaziland, is a high-volume site with a voluntary HIV counseling and testing (VCT) unit. The VCT unit services a catchment population of 8,469 people. In December 2014, the health facility realized during a standard review of health records that only 4.7% of VCT patients who missed appointments or defaulted (in the October–December 2014 interval) were contacted to return to care. The center responded with a root-cause analysis to ascertain the problems causing this low contact rate and inform solutions. The analysis revealed key challenges in tracing patients (Figure 8).

Interventions

A QI team, consisting of VCT staff, was developed by the health center. This team selected and tested a combination of interventions to tackle LTFU:

• The team first assigned an "expert client," a client who is in regular attendance at the facility and actively adhering to medication, to serve as a peer mentor. This mentor was trained to monitor the number of patients expected to visit the site for routine care, the number of patients who retrieved medications or missed appointments, and the number of patients defaulting or LTFU.

The expert client would then call patients and, if unable to convince them to visit the health center, would provide a home visit to ensure counseling.

• The QI team launched client "education sessions," which would take place in the mornings at the clinic. These sessions were also built into routine counseling. In these sessions, treatment adherence was reinforced and clients were informed of the importance of providing accurate contact information.

• The team also advised the VCT unit to no longer supply patients with extra doses of ART, as this was a disincentive to returning on time. The VCT stopped giving patients extra doses in advance of upcoming appointments. Appointments were revised to coincide with the date clients would finish their pills.

Results

The proportion of missing or defaulting pre-ART and ART clients who received follow-up calls and counseling increased from 4.7% in October–December 2014 to 60% in July–August 2016, and the overall retention of pre-ART and ART patients increased slightly, from 87% in January–March 2015 to 94% in July–August 2016 (Figure 9).

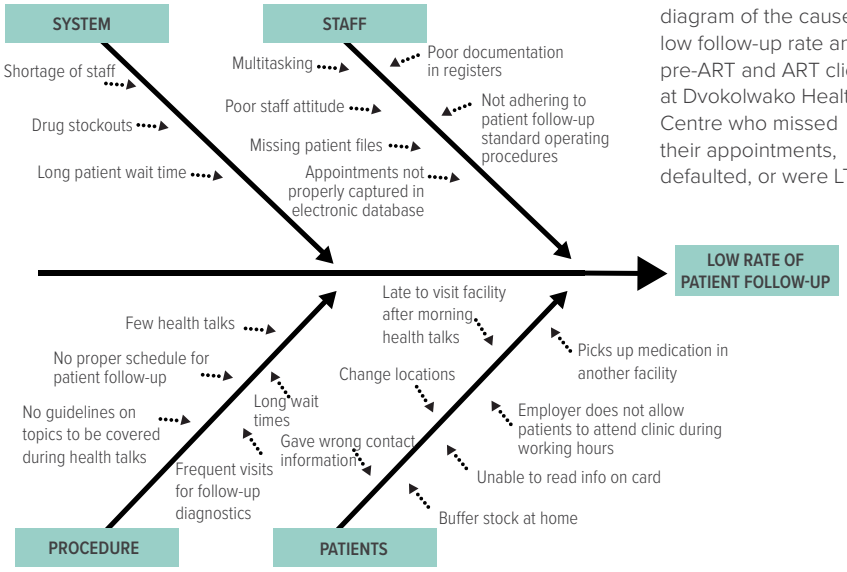


FIGURE 8 Fishbone diagram of the causes of low follow-up rate among pre-ART and ART clients at Dvokolwako Health Centre who missed their appointments, defaulted, or were LTFU

Challenges

Despite the efforts of the health facility to follow patients and educate them on the importance of keeping appointments, some clients still gave incorrect contact information and would not honor appointment dates. The facility also suffered from a shortage of staff, making follow-up difficult when expert clients were on leave.

Lessons Learned

• Calling clients via mobile phone was key in improving retention. However, this intervention must be coupled with other approaches, including intensified education among clients about the importance of giving correct contact information.

• Giving three-month refills to patients who are adhering to treatment and keeping their appointments motivates them to continue honoring their appointments, while giving shorter refills to those who do not keep their appointments can help keep these patients engaged through constant reinforcement of the importance of adherence. This model of differentiated care would not only reduce work burden and help staff better focus on the clients needing greater adherence support, but will certainly be needed as we move to Treatment for All.

• Task shifting to expert clients, with strong collaboration between expert clients and health care staff, helped this facility reach more clients in need of adherence counseling.

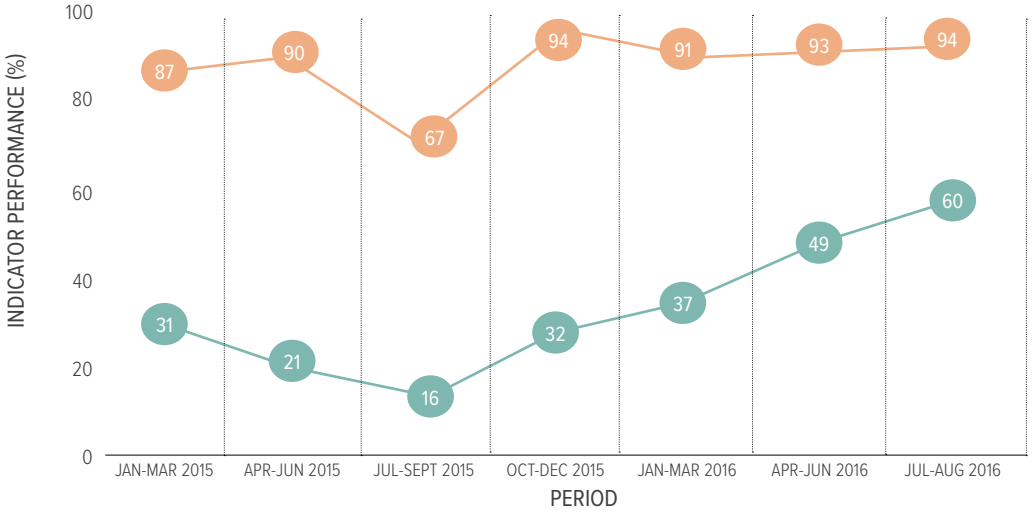


FIGURE 9

Pre-ART and ART patient follow-up rate and retention at Dvokolwako VCT unit by quarter, 2015–2016

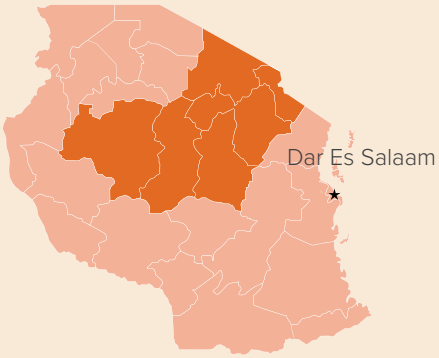
Retention in care

Patient follow-up

In Tanzania...

The Consumer Voice Model Implemented In 25 EGPAF-Supported Sites Brings Tanzania Closer To Patient-Centered Care

EGPAF began supporting HIV and AIDS programming in Tanzania in 2003 and established a country office in 2004. EGPAF is now supporting HIV prevention, care, and treatment services at more than 400 health facilities through direct support, and at over 1,200 other facilities through indirect support to local partners in six regions of Tanzania. To date, EGPAF–Tanzania has enrolled more than 192,300 clients in HIV care and support programs, including more than 16,700 children; started over 129,200 individuals on ART, including nearly 12,000 children; and provided PMTCT services to nearly 4.2 million women.



EGPAF-supported regions

The degree to which health systems meet consumer needs is an important determinant of a person's uptake, retention, and adherence across a continuum of care. QI methodologies that increase stakeholder involvement and patient satisfaction represent an opportunity to design more effective programs. In Tanzania, EGPAF implemented a QI-based intervention called Consumer Voice, which aimed to elicit consumer perspectives on service provision and improve the quality of care provided. This model incorporated (1) consumer/community dialogues facilitated by community resource persons ([CRPs] a cadre of community health workers providing home-based care) and Council Health Management Teams (CHMTs), (2) consumer satisfaction surveys administered to patients in facilities, and (3) promotion of consumer representation on facility-based QI teams. The model was introduced to facilities and communities through a series of orientation sessions and took place over a three- to six-month period.

Principles of the Consumer Voice Model

- **Bridging facilities with communities.** Engaging a diverse group of consumers can facilitate two-way communication, bringing issues and ideas to the attention of providers and bringing back information about policies and practices to the community.
- **Strengthening outreach.** Routine dialogue between health systems and community representatives can strengthen service provision and access among those who are least served or systematically excluded.
- **Feedback on perceived quality.** Community engagement mechanisms can provide opportunities for health service providers and their managers to understand perceptions of the quality of services, offer suggestions for improvement, and provide insight into strategies that have succeeded.
- **Providing a consumer perspective.** The critical insights of current and future consumers of services can inform and enhance the development of policy, procedures, and service delivery.

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Dialogues And Community-Based QI

Between 2013 and 2015, EGPAF worked in collaboration with facility-based and district health management QI teams to introduce the Consumer Voice program (Figure 10) in 25 health facilities and their catchment communities in the Kilimanjaro, Arusha, Tabora, and Lindi regions. The CRPs implemented a total of 58 community dialogues with an average of 44 participants in each (2,600 total participants). Local leaders were asked to select two to six people from each village in the facility's catchment area to attend the dialogues. In addition, poster announcements in the Kiswahili language were posted in facilities and local meeting places. Participants were encouraged to identify good practices implemented and discuss issues adversely affecting services. In response to negative feedback, plans to solve problems at the community and facility levels were proposed.

CRPs administered consumer satisfaction surveys to a total 864 participants quarterly at each facility (analyzed by the CHMT with EGPAF support). Informed consent was obtained from all respondents and patient confidentiality was protected. The CRPs submitted community feedback directly to the QI team at each health facility. Facility-based QI teams used the information collected during community dialogues and surveys to identify improvement plans, monitor changes, and document the process. The CRPs were responsible for ensuring that the changes implemented, based on feedback, were communicated back to the communities.

Evaluation Of The Consumer Voice Intervention

To measure the impact of this model, EGPAF–Tanzania conducted 19 focus group discussions with key implementers from seven of the 25 program sites, representing four regions of Tanzania. At each site, one focus group discussion was held with the CRPs and one with health providers. In addition, a focus group discussion was held with CHMT members for each district. The evaluation was approved by the national institutional review board and a U.S. institutional review board. Interview transcripts were coded and analyzed using MAXQDA (v13).

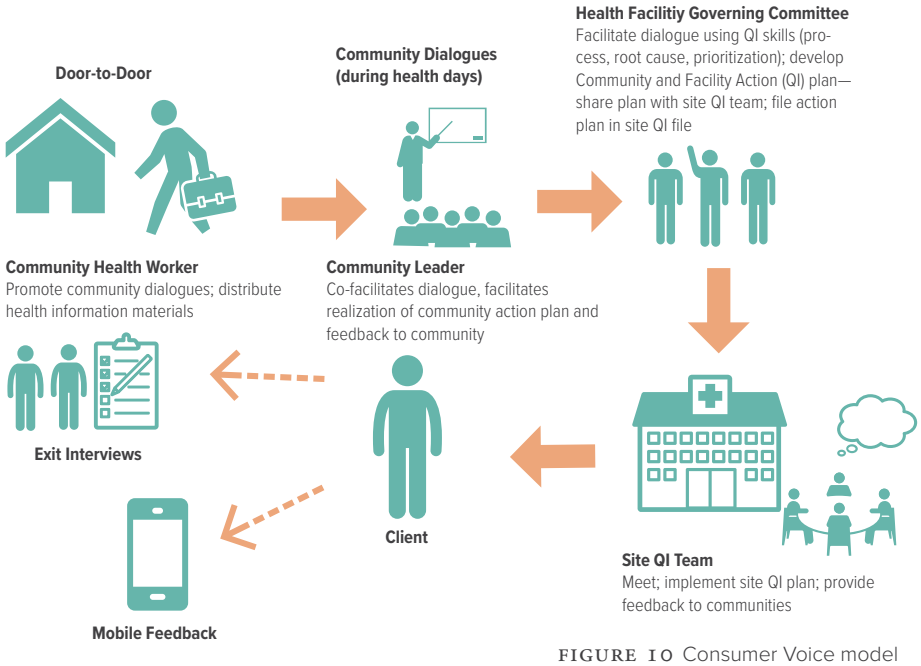

FIGURE 10 Consumer Voice model

Knowledge Of Aims And Roles/ Responsibilities

Participants from the CHMT, facility health providers, and CRPs generally showed good understanding of the participatory methods used within the program, linking them to improved quality of care.

What I understand about Consumer Voice is to understand several problems which are happening here at the facility and solve them.

– Health Provider

Depending on who was interviewed, different aspects of responsibility were described, reflecting an appreciation of the different roles CRPs, health providers, and CHMT members play. For example, CRPs discussed how they prepared for and managed dialogues to maximize participation and diversity of opinion, and health providers reported that their role was to receive feedback and work within the QI teams to address issues.

Responses show that these tested changes produced measurable reductions in consumer complaints:

- Appointment time blocks
- Two additional drug dispensing stations
- Placing a clock in the staff meeting room to encourage timeliness of meetings and breaks

Problem Solving Through Accountability Linked To Consumer Voice

One important outcome of Consumer Voice was the way in which provider allocation imbalances were addressed, resulting in fewer patients being turned away from health services due to provider absences or clinic closure.

Before, clients who missed [their] appointment even by a day or two were not getting their drugs; they were told, "It is not clinic day." They [would] have to come in [on] another clinic day. Now, nobody is sent home without drugs and there is a clinician all the time at [the] clinic. – CRP

Health providers perceived Consumer Voice as an accountability tool—something that encouraged them to take corrective action. They reported that once issues were brought to their attention, they did their best to ensure problems were solved.

Improved Facility-Community Relationships, Innovation, And Sustainability

The involvement of the CHMT in surveys, dialogues, and QI meetings contributed to the accountability benefits of Consumer Voice, as reported at the facility level and among district managers. In one facility, managers and district authorities were held to account for poor infrastructure and an incomplete construction project.

…they wanted construction of [a] building to be completed because previously the dispensary was in that house [points to a house that can be seen from the window]. After follow-up in the second and third meeting, the construction was completed. – CRP

Overall, opinions of Consumer Voice were favorable, with many happy about the formal engagement of community members in providing feedback to health care workers. Providers described the program as an opportunity for two-way communication, increasing client satisfaction and allowing providers an opportunity to explain the rationale for why services are organized the way they are.

[It is also] a good opportunity where service recipients can learn how we provide our services instead of lamenting about it in [the] streets.
– Health Provider

Disrespectful communication between providers and consumers was identified by both parties.

Health providers complain that their clients are using bad language toward them, and we took such feedback to the community and told them they should change, especially speaking politely to providers. The community also admits having such problems. – CRP

In one community dialogue, poor quality of care in labor and delivery was cited, with community members saying that women were required to wash hospital linens after their babies' delivery and that staff spoke rudely to patients. After the district management addressed the issue with hospital staff, consumers reported an improvement in communications. Some respondents described how the intervention resulted in increased expenditures on health services, or plans to continue investment, independent of EGPAF support.

Challenges

Some concerns were raised, initially, among health providers who were suspicious of the process. They thought of it as a performance-tracking tool. These concerns were, however, relieved when implementation of the program was underway. Other issues involved problems that could not be easily addressed at facility-level (e.g., stock-outs of medications from the national supply chain).

Conclusions And Way Forward

This evaluation of Consumer Voice provides important evidence of acceptance and feasibility and suggests effectiveness in several instances. Despite some reluctance initially, the introduction of formal and organized approaches to incorporate community engagement in reviewing and improving services earned appreciation at all levels. Focus group participants agreed that these interventions were instrumental in identifying challenges associated with quality of services. Patients noted an appreciation of an improvement in quality of services in these discussions. CHMTs reported willingness to incorporate the program into their budgets in the future. EGPAF will continue to provide technical assistance through orientation, QI technical support, and program evaluation and has used the evaluation findings to optimize the model in new projects.

In Zimbabwe...

The Impact Of Intensive Coaching To Implement A Robust QI Program At The District Level

EGPAF–Zimbabwe has helped the country work toward its goal of near elimination of new pediatric HIV infections by supporting PMTCT and pediatric HIV care and treatment programs at the facility, district, provincial, and national levels. In addition to direct health service delivery support, EGPAF–Zimbabwe advocates for policies aligned with community needs focused on PMTCT, EID, and the specific needs of HIV-positive children and adolescents. To date, EGPAF has provided HIV counseling and testing to more than 2.8 million pregnant women and antiretroviral prophylaxis to more than 429,000 HIV-positive pregnant women and more than 345,000 HIV-exposed infants in Zimbabwe.

EGPAF-supported regions

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After establishing universal coverage of ART in health facilities, per 2015 WHO treatment guidelines, Zimbabwe's Ministry of Health and Child Care (MOHCC) focused on achieving optimal HIV treatment outcomes through QI. The MOHCC set-up a structured HIV QI program in 2013 (Figure 11). The MOHCC tracked the progress of the program from 2013 to the end of 2015 and found limited progress in program implementation and expansion due to a lack of resources to sustainably build the capacity of health providers.

From the last quarter of 2015 through February 2016, the MOHCC embarked on an exercise to improve the quality of HIV programming throughout the country by allocating nearly 800 sites in Zimbabwe to program implementers to enhance program effectiveness. In 2015, EGPAF–Zimbabwe began advising the national QI Technical Working Group on methodologies (tracking tools of the national program and training reference materials) to enhance program effectiveness through QI and was allocated 328 of these 800 sites.

FIGURE 11 Zimbabwe's QI Framework

Intervention Description

EGPAF rolled out a training on quality management and consumer satisfaction, which would result in the development of "QI champions" at each of the 328 sites. The training was launched through a phased approach over a year—training a few sites at a time and scaling up the training and full implementation of QI at 312 sites by the end of 2016. EGPAF also introduced an intensive and structured QI site support package with monthly site coaching to enhance implementation. Initial organizational assessments were conducted by district focal persons, who

provided information to coaches on where to focus QI. Subsequent coaching activities focused on building the capacity of site staff to conduct performance measurement for QI, designing appropriate projects to close gaps discovered during data reviews, and testing proposed changes. Some of these proposed changes included scheduling weekly meetings to identify and recall clients who missed visits, placement of provider and client reminders in strategic places for better viewing, tagging files for mothers to join mother-baby support groups, and workflow simplification to reduce missed client appointments and improve documentation and client tracking. Once every quarter, EGPAF–Zimbabwe convened peer learning meetings at the provincial level, led by country office staff and MOHCC QI leads. EGPAF district focal persons conducted a total of 3,584 coaching sessions in 2016.

Evaluation

EGPAF–Zimbabwe's QI implementation support led to significantly improved service delivery for nine out of 13 QI indicators (Table 1), including five of seven adult QI/ART indicators and half of the pediatric HIV treatment and care indicators. In addition, this support led to development of structures to further strengthen QI moving forward; 288 of the supported sites formed functional and active QI committees that meet at least once per month to guide QI implementation in each facility, a total of 938 QI projects were undertaken in all supported sites (three per supported site), and client feedback mechanisms were set up in 279 sites to capture client views to better inform QI efforts.

Lessons Learned

The improved results achieved through QI support efforts in these facilities yielded multiple lessons:

• Classroom-based training can be strengthened with on-the-job support to reinforce knowledge.

• To successfully build continuous QI, senior leadership within the health facilities must be enabled to lead QI initiatives. This should be followed with structured and progressive iterative processes of supporting the implementation of actual QI actions, with sustained coaching and mentoring of health providers.

• Continuous QI requires that managers review implementation progress and think through project improvement to address challenges.

Way Forward

EGPAF is supporting the MOHCC to roll-out this approach to other facilities in Zimbabwe. The MOHCC will take on ownership of these approaches, with allocation of national funding toward these efforts, in all 800 sites by building capacity among district health managers and health facility leads through joint supportive supervision.

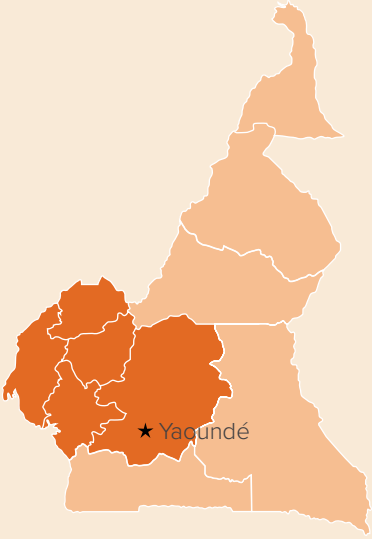
TABLE 1 Comparison of service uptake before and during QI implementation, all EGPAF/QI-supported sites

INDICATOR	BASELINE (OCTOBER-DECEMBER 2015)	ENDLINE (OCTOBER-DECEMBER 2016)	*P* VALUE
HIV TESTING			
Proportion of HIV-negative pregnant women retested in third trimester	36.1%	65.2%	<.001
Proportion of HIV-exposed infants HIV tested before two months of age	71.2%	77.5%	.0054
Proportion of HIV-exposed infants tested who received results within one month	15.6%	26.9%	<.001
ART INITIATION			
Proportion of HIV-positive pregnant women initiated on ART on same day as identification in antenatal care	60.4%	69.9%	.0055
Proportion of HIV-positive children under 15 years initiated on ART	40.9%	45.7%	.11
Proportion of HIV-positive children initiated on ART before two years of age	40.0%	38.7%	.63
RETENTION ON ART			
Proportion of general ART clients retained on ART in the past six months	87.2%	90.9%	.0077
Proportion of HIV-positive women retained in care six months after initiation in antenatal care	48.2%	41.3%	.96
Proportion of children retained on ART six months after initiation, before two years of age	3.4%	44.3%	<.001*
QUALITY-OF-CARE MONITORING			
Proportion of ART clients assessed for adherence at last visit	78.3%	89.2%	<.001*
Proportion of ART clients TB-tested at last visit	92.8%	93.9%	.17
Proportions of ART clients routinely monitored through CD4 testing	12.4%	15.8%	.0084*
Proportion of HIV-exposed infants initiated on cotrimoxazole prophylaxis	65.8%	74.2%	.0005*

In Cameroon...

Enhancing Pediatric And Adolescent ART Linkages Through QI

EGPAF began supporting HIV and AIDS programming in Cameroon in 2000, in partnership with the Cameroon Baptist Convention Health Services (CBCHS). In 2015, EGPAF opened its first office in Cameroon, using funding from the U.S. Centers for Disease Control and Prevention (CDC) under our Delivering Technical Assistance (DELTA) Project. Now, EGPAF supports HIV testing and counseling, PMTCT, and care and treatment services at more than 90 health facilities and HIV/AIDS pediatric services at 27 health facilities in the country.



EGPAF-supported regions

The Challenge

Despite a high risk of mortality (80%) among HIV-positive children without access to treatment in the first five years of life, identification of new HIV cases and initiation of ART among HIV-positive children continue to remain major challenges in Cameroon. By the end of 2015, the ART coverage rate was 11% among HIV-positive children, compared to 30% in adults.[6] EGPAF–Cameroon supported the Ministry of Public Health in the expansion of national pediatric HIV care and management through implementation of a pediatric training model† at four Pediatric Training Centers of Excellence (PTCs). Despite enhanced training at the PTCs, initial data reviews indicated low pediatric HIV testing rates (less than 20%), inconsistent pediatric HIV testing across health facility entry points, and shortfalls in linking clients to ART. Further investigations attributed challenges to poor health worker and institutional capacity.

The QI Approach

EGPAF convened QI teams within each of the four PTCs. These teams focused on identification, monitoring, and implementation of priority QI projects, such as carrying out systematic provider-initiated testing and counseling at all entry points; improving documentation of services delivered; and increasing ART coverage among HIV-positive cases identified (Table 2). Each PTC recruited a team of linkage agents to ensure active connection of HIV-positive children to ART. Community mobilization was also implemented to enhance local awareness of HIV and boost demand for HIV counseling and testing. A team of psychosocial support staff were recruited and trained to improve patient education, provide adequate preparatory and ongoing adherence counseling, and promote retention in pediatric care and treatment.

For entry points with lower HIV testing uptake, the QI team introduced rapid point-

Table 2 Strategies used to target challenges of pediatric HIV testing and treatment at four PTCs

Health care worker capacity-building	Infrastructure Upgrades
• Increased clinical knowledge, skills, and attitudes through on-site training on a standard package of pediatric HIV/AIDS care and treatment methods • Introduced and established performance improvement processes • Ensured continuous mentoring of trainees and follow-up practice post-training	• Created and equipped child-friendly corners at sites • Executed minor renovations for counseling, psychosocial, and nutrition units • Provided basic consultation materials and equipment • Developed a patient flowchart posted in all PTCs to improve patient flow, reduce wait times, and provide patients with a resource to help them navigate the care cascade

† The EGPAF–Cameroon pediatric training model uses a nationally-validated, pediatric HIV management curriculum, which aims to provide efficacious pediatric HIV management training to health care workers to build their capacity for pediatric HIV care and treatment to support the Ministry of Public Health in the national pediatric AIDS response.

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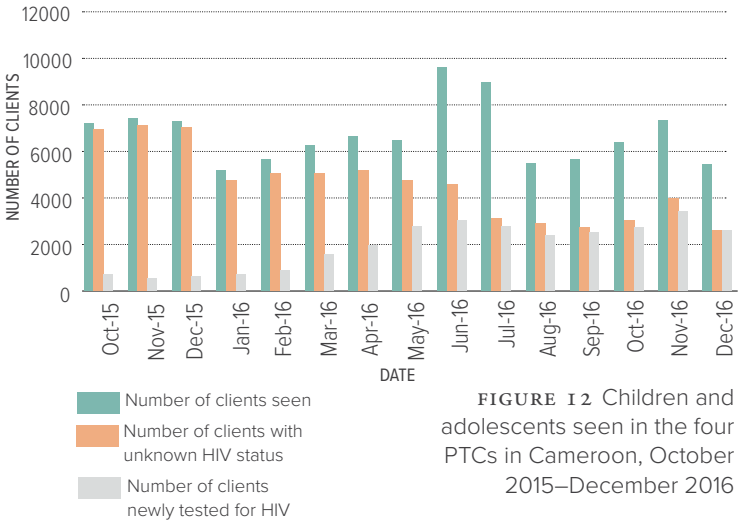

FIGURE 12 Children and adolescents seen in the four PTCs in Cameroon, October 2015–December 2016

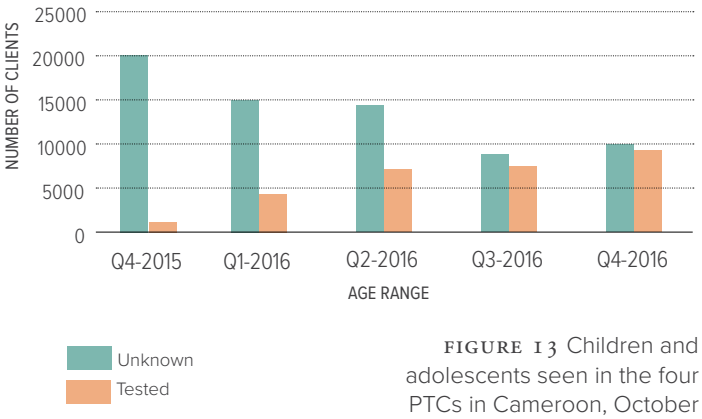

FIGURE 13 Children and adolescents seen in the four PTCs in Cameroon, October 2015–December 2016

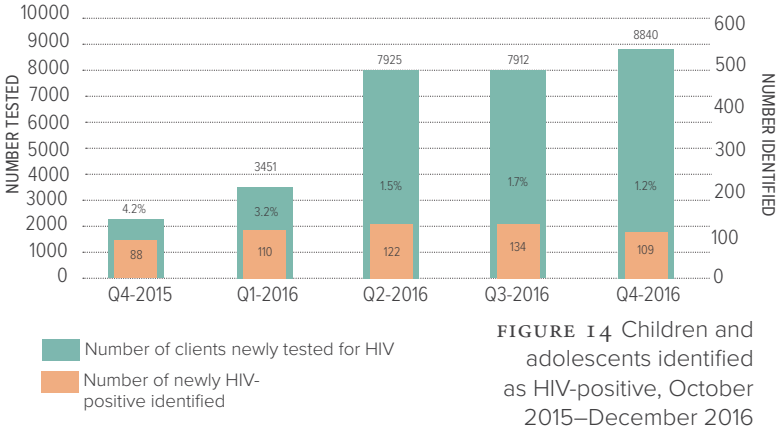

FIGURE 14 Children and adolescents identified as HIV-positive, October 2015–December 2016

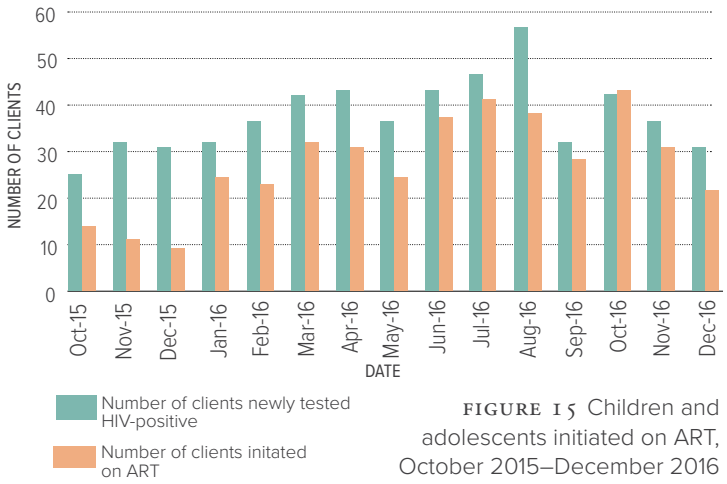

FIGURE 15 Children and adolescents initiated on ART, October 2015–December 2016

of-care HIV testing to reduce testing wait times.

Through weekly and monthly coordination meetings, QI teams reviewed HIV testing uptake at all entry points, reviewed linkage to and initiation of ART, discussed challenges, identified best practices, assessed overall site performance, and developed continuous improvement processes.

Results

Implementation of these approaches resulted in increased pediatric and adolescent HIV testing and ART initiation among those living with HIV (Figures 12-15). HIV testing rates increased from 23% in January–March 2016 to 91% in October–December 2016 in all four PTCs combined. ART initiation rates increased from 72% in January–March 2016 to 87% in October–December 2016. Throughout 2016, an average of 118 HIV-positive cases among children and adolescents were identified per quarter, compared to 88 in December 2015 in all four PTCs.

Improved documentation of HIV testing and ART initiation indicators revealed that the HIV positivity rate could have been inflated in previous analyses (e.g., the rate drop from 3.2% to 1.2% despite an increase in numbers tested). Additionally, the HIV positivity rate did not increase linearly, with the increase in numbers tested, possibly due to saturation in the number of positive cases to be identified.

Lessons Learned

The QI approach led to significant improvements in the program targets for pediatric HIV testing, and care and treatment in the four PTCs. The approach focused on both health worker and institutional capacity. Moving forward, interdisciplinary data review meetings that allow QI teams to monitor progress through an increased focus on data quality and ownership of programmatic results will continue to be instrumental. The PTCs will also focus on introducing patient review and feedback to sustain growth in use of PTCs and related services.

Optimizing Internal Organizational Operations And Finance: EGPAF-Democratic Republic Of Congo Employs "POA" Methodology

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In 2016, the Program Optimization Approach (POA) was launched in EGPAF's Democratic Republic of Congo's program (EGPAF-DRC), following a workshop facilitated by EGPAF–Global. Using QI tools and resources for problem identification and process mapping during the workshop, the team identified optimization opportunities within operations, including awards and compliance and human resources (HR). The team developed a Country POA Oversight Committee (C-POC), which created terms of reference, and began holding monthly meetings, during which it created a six-month timeline to resolve the most pressing issues, including financial payment request processing times and increasing staff understanding of HR policies.

Issue Resolution Using POA Methodology

Financial Request Efficiency

All teams were concerned with the timing of payment for financial requests (submitted to the finance team by technical teams), which had an average processing time of five business days—long enough to disrupt programmatic activities, including mentorship and support groups' meeting funds. After conducting a root-cause analysis and a document review of existing financial request registers, the C-POC found a lack of critical information on the status of submitted requests. The team implemented changes to

help the finance department better document and track requests: additional categories were added to the register to indicate the status of requests, and columns were added to the register to clarify file completeness, request arrival date, status upon arrival, and follow-up dates for rejected requests, as well as when funds were released. The C-POC worked also to increase the number of days per week available for processing financial payments and requests. After implementing changes, the C-POC analyzed processing times for 1,059 payment requests received from July through December 2016 and found that 66% were processed within three days.

Ensuring Staff Understanding of Human Resources Policies

English is the official language of EGPAF; however, the EGPAF–DRC team is almost entirely francophone. Staff attending the workshop seemed to have many questions on untranslated HR policies. DRC's C-POC worked with other EGPAF francophone countries (Cameroon and Côte d'Ivoire) to collect French-translated policies and translated a number of additional policies on their own. The team established a francophone "ethics hotline" to respond to HR questions in French. The C-POC plans to conduct a short employee survey to assess understanding of the above-mentioned policies.

Future Directions Of POA in DRC

Overall, EGPAF–DRC has found that POA improved organizational efficiency, especially within HR and finance, which will be sustained as the program grows with new opportunities on the horizon.

In Côte d'Ivoire...

Achievements In Increasing Retention Rates In PMTCT And HIV Care And Treatment Through QI Approaches In Côte d'Ivoire

EGPAF has worked in partnership with Côte d'Ivoire's MOH since 2011 to achieve epidemic control in four regions of the country through a CDC/PEPFAR-funded project, Djidja (2011–2016). Djidja supports health system strengthening and service implementation in 106 care and treatment and 152 PMTCT sites. Through Djidja alone, EGPAF has identified more than 12,000 HIV-positive pregnant women, linked 95% of these women to treatment, and initiated more than 22,000 HIV-positive individuals on treatment, including 1,172 HIV-positive children.

EGPAF-supported regions

QI has demonstrated potential to enhance consumer enrollment and retention in HIV care and treatment and address LTFU, an area of weakness plaguing many HIV programs in resource-limited countries.[7,8,9] With national HIV care and treatment retention rates under 80%, PEPFAR-implementing partners in Côte d'Ivoire faced persistent challenges in securing patients' enrollment in HIV care services and lifelong treatment adherence. In 2014, PEPFAR called for programs to target evidence-based interventions for populations at high risk, in areas of greatest HIV incidence.[10] In response to the "PEPFAR pivot", EGPAF launched a QI approach to identify gaps in service delivery, informed by a baseline assessment of 15 high-volume sites. The baseline analysis revealed that only 73% of HIV-positive adults and children were alive and still on treatment.

Intervention Description

EGPAF–Côte d'Ivoire's QI team identified the most problematic indicators reported from sites within PMTCT, care and treatment, and counseling and testing programs, and implemented three retention strategies (Table 3).

To complement these strategies, the QI team delivered a series of training sessions at supported facilities to build the knowledge of health workers on QI methodologies and concepts throughout 2016. The team also implemented key patient-focused clinical strategies that included (1) development of a patient tracking documentation tool, (2) capacity-building for community health workers and providers on a service delivery algorithm to target HIV-positive individuals at high risk of LTFU, (3) development of patient appointment reminders, and (4) scheduled community health worker home visits to HIV-positive patients who missed appointments to strengthen care and support services. ART registers, patient files, and the national electronic patient-level database were used to monitor improvements in retention.

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TABLE 3 QI Strategies

STRATEGY	DESCRIPTION
Actively Monitoring the Cohort (SAC)	• Targets retention of patients on ART in their first 12 months post–treatment initiation. • Program officers and community health workers analyze patient data on a weekly basis and plan visits (after 6 months and 12 months on ART) to the homes of patients who fail to return to clinics for a checkup and medications. Community workers, providing home visits, counsel clients on the importance of adherence. • This strategy has since scaled up to 84 sites, as of September 2016.
Using Evidence to Inform Action (CAR)	• Aims to increase access to high-quality care and treatment support services and ensure greater enrollment and retention in care and treatment. • EGPAF staff conduct quarterly site visits to review strategies, services, and care implemented based on key performance indicators from the previous quarter. The team works with sites to implement recommended changes and improve areas of weakness. • EGPAF began implementing CAR at 84 care and treatment sites in 2014.
Active Follow-up of the Mother-Baby Pair (SAFE)	• Aims to ensure the highest quality of service delivery to HIV-positive pregnant or breastfeeding women and their HIV-exposed infants. • EGPAF program officers monitor the delivery of a minimum package of services (antenatal care visits, ART provision, nutrition assessment, EID, infant ART) and also work with sites to initiate follow-up services (appointment reminders, phone calls, home visits) among clients who have missed appointments. • EGPAF has implemented SAFE in 60 high-volume PMTCT sites since 2015.

Evaluation of QI

Using the SAC, CAR, and SAFE strategies, along with QI process mapping, problem identification, and the establishment of facility-based QI teams, the Project Djidja team intensified cohort monitoring of HIV-positive patients to track retention, systematically increase six-month retention rates, and reduce LTFU across all project sites (Figure 16). Presently, Project Djida has active QI projects focused on improving six-month retention rates, where performance has surpassed national retention rates. Approximately 93% of HIV-positive patients have remained on treatment at six months in these supported sites (Figure 17).

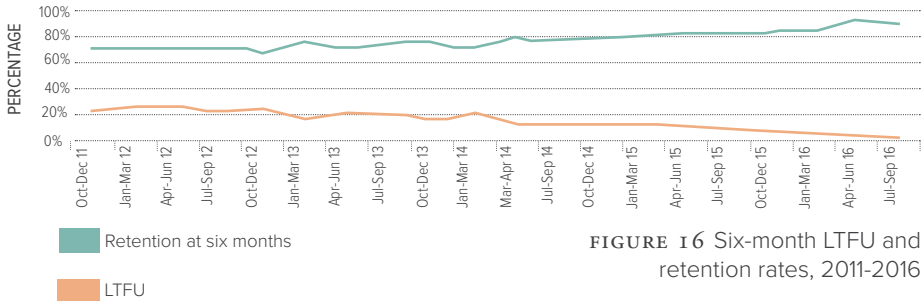


FIGURE 16 Six-month LTFU and retention rates, 2011-2016

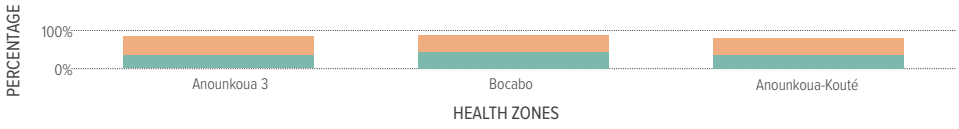


FIGURE 17 Six-month retention rates across three QI sites in Anonkoua 3, Bocabo, and Anonkoua-Kouté Health Zones

Challenges

The team has faced numerous challenges in scaling up QI over the past several years. Some of these challenges can be attributed to a lack of motivation among overburdened facility staff — a situation that has greatly improved due to the delivery of capacity-building, taskshifting and broadening recognition that QI processes increase staff efficiency.

The team also faced challenges with streamlining various QI approaches and learned to align approaches with national QI tools to ensure a collaborative effort. However, the consistent implementation of these different strategies remains a major challenge due to health system HR constraints at the facility level in Côte d'Ivoire.

Lessons Learned

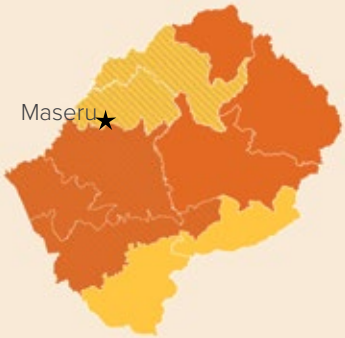
• An important lesson from this program is that responding to low retention requires a holistic, multilevel approach, involving multiple strategies and various program officers, health workers, and lay counselors.

• Implementing revised tools, and continuously training health workers and lay counselors on their use, enabled the program to clearly identify the employed strategies' impact on retention.

In Lesotho...

Using QI For Remedial Actions In The "Strengthening The TB And HIV/AIDS Response In Lesotho" (STAR-L) Project

In Lesotho, nearly 25% of the population is living with HIV, which is the country's leading cause of death. Lesotho is suffering from a double epidemic of both HIV and TB; approximately 74% of those with TB are also HIV-positive. Through PEPFAR support, EGPAF is currently working to implement a comprehensive HIV package of services in five scale-up districts: Leribe, Berea, Maseru, Mafeteng, and Mohale's Hoek. This package includes support for the provision of HIV testing services, PMTCT services, adult and pediatric HIV care and treatment, adult and pediatric TB and TB/HIV care and treatment, reproductive health care, nutrition support, community support, SI&E, and QI.



USAID-funded districts

CDC-funded districts

PEPFAR scale-up districts

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In December 2014, PEPFAR introduced the Site Improvement through Monitoring System (SIMS) in Lesotho. SIMS monitors clinical capacity to provide high-quality TB/HIV services. It also identifies gaps and makes recommendations for improvements. It rates overall performance, showing areas that surpassed expectations (90% or more), met expectations (80%–89%), need improvement (60%–79%), or need urgent remediation (below 60%). All scores indicate how sites are performing against national standards. For the Berea and Leribe districts, supported by the EGPAF STAR-L project, SIMS was rolled out in July 2015.

In 2016, EGPAF-Lesotho developed a cadre of staff specifically responsible for monitoring the quality of health programs. Program performance improvement officers (PPIOs) use QI methodologies to monitor the quality of HIV and TB services provided at supported facilities. PPIOs work with the SIMS-evaluated facilities to address issues identified by the assessment and are responsible for supporting, coordinating, and providing technical expertise for the implementation of QI initiatives in health facilities.

Twenty-one STAR-L sites received both initial and follow-up SIMS visits, of which only four (19%) met expectations (Figure 18). The majority of sites did not score well: 17 (81%) required improvement. Weaknesses common in almost all 17 facilities included HIV testing interruption, inadequate health worker testing proficiency, unsuccessful referrals to HIV care and treatment, poor TB prophylaxis (isoniazid preventive therapy [IPT]) initiation, weak EID, poor adult and pediatric ART monitoring, and deficient nutrition assessment and counseling.

Description

In January 2016, PPIOs began helping the facilities to establish QI committees and provided on-site training and continuous mentorship on QI principles and methods. QI committee members were taught how to implement and monitor QI projects based on SIMS results. Ongoing solutions commonly tested by committees across all sites included on-site training and mentorship on QI,

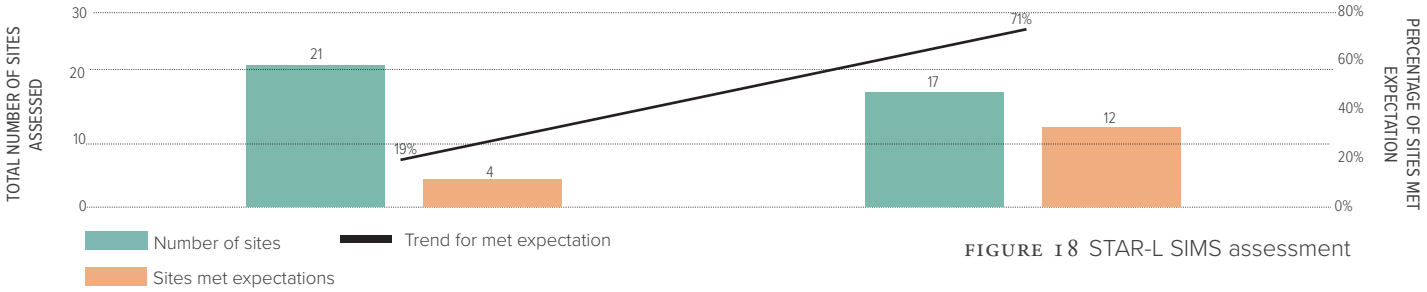


FIGURE 18 STAR-L SIMS assessment

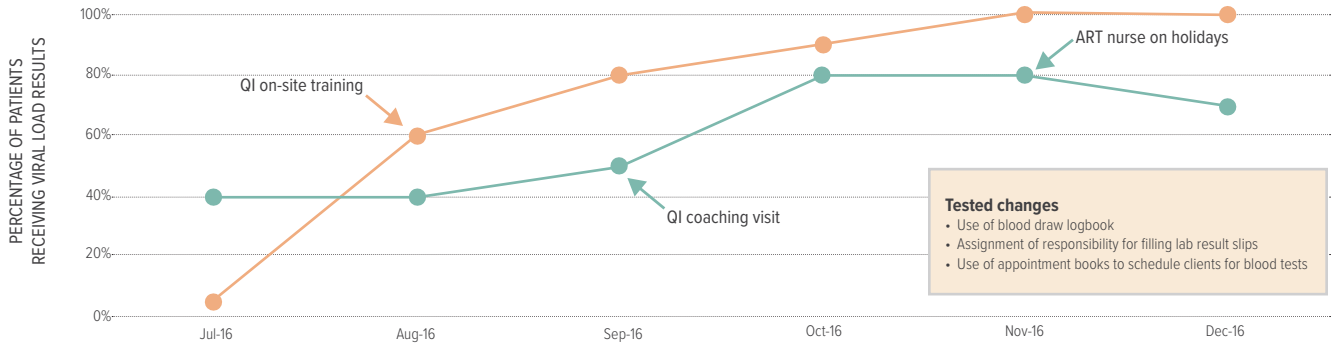
improving documentation of client information and services rendered in registers and patient records, and improvements in appointment systems (e.g., using central appointment books so that health workers can easily identify who has failed to return to the clinic for follow-up, treatment initiation, etc.).

Results

Comprehensive SIMS reassessments were performed at 17 of the original STAR-L project sites six months after the initial assessments. There was a marked increase in the number of sites that had successfully implemented remedial actions so as to meet SIMS standards. One site surpassed expectations, and 11 out of the 17 sites (71%) met expectations.

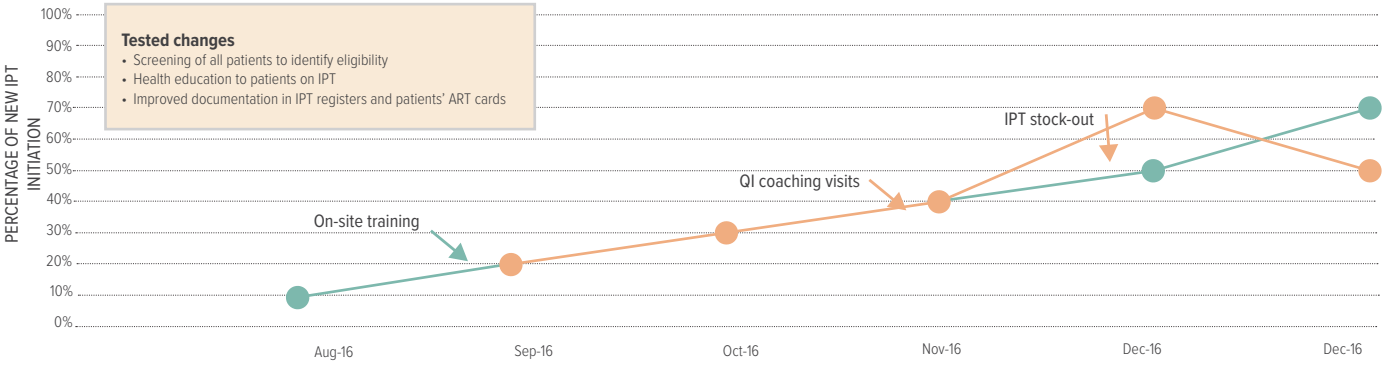
Other Key Results From Several Facilities Benefitting from QI Initiatives

Figures 19 and 20 show examples of QI projects implemented at four sites: Motebang Hospital, Little Flower Health Centre, Mamohau Hospital, and Khabo Health Center.



	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16
Motebang	40%	40%	50%	80%	80%	70%
Little Flower	5%	60%	80%	90%	100%	100%

FIGURE 19 ART monitoring with viral load test in Motebang and Little Flower facilities, July–December 2016



	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17
Mamohau	10%	20%	30%	40%	50%	70%
Khabo		20%	30%	40%	70%	50%

FIGURE 20 IPT initiation for newly-diagnosed, HIV-positive patients in Momohau and Khabo

Key improvements across sites:

• Good Shepherd Health Centre increased ART initiation among newly-diagnosed, HIV-positive patients from 64% to 75% between May 2016 and September 2016. Strategies used to improve ART initiation at this site included:

- Full rollout of the 2015 WHO guidelines recommending Treatment for All
- Strengthened linkages between testing and treatment points (through escorting patients to the ART center to ensure that they received treatment on the day of diagnosis)

• Immaculate Health Centre increased TB contact tracing from 15% to 81% between July 2016 and January 2017 through village health worker support (who provided door-to-door education in the communities) and by ensuring TB screening of all patients at every entry point within the site.

Next Steps

QI has proven to be an effective approach for sites to address shortfalls and improve their services. EGPAF–Lesotho will continue to expand QI activities through further QI support to district health teams and site QI committees. These activities will continue to focus on ongoing learning processes, documentation of QI activities, and learning sessions. Customer satisfaction surveys will also be introduced in the future.

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Q&A WITH

Dr. Nicholas Hellmann, Strategy And Science Advisor, Medical and Scientific Affairs and Dr. Ibrahim Kirunda, Director of QI, EGPAF-Uganda

Dr. Hellmann served as EGPAF's executive vice president of medical and scientific affairs (MSA) for nine years. He currently serves as an advisor and guides programmatic progress and scientific research of the division. He has been heavily involved in the expansion of QI at a global level. Dr. Ibrahim Kirunda is the director of QI in EGPAF-Uganda's country office. He has years of experience implementing QI approaches at a focused country and health-site level. We interviewed these two QI experts to better understand how QI serves progress both at global and country levels.

Dr. Nicholas Hellmann

What drew you to the field of pediatric HIV, and to EGPAF, in particular?

My career focused on HIV since my medical residency in 1982. My initial focus was on adults, but that evolved as I engaged in global health work in Uganda (1988–1991), where I was fortunate to meet a superb pediatric HIV specialist, Dr. Laura Guay (now the vice president of research at EGPAF). Later, I worked on development of HIV drugs and diagnostics for adults and children, but returned to global health at the Bill & Melinda Gates Foundation, where I actively interfaced with EGPAF on PMTCT and HIV vaccine efforts and recognized the passion, skill, and focus of EGPAF. When later offered an opportunity, I was eager to join such a talented and dedicated organization.

How do you think QI will help EGPAF reach its goal of a generation free of HIV?

HIV is an enormous health challenge across the globe. Fortunately, there has been progress in transforming the disease from a death sentence into one that can be readily managed. However, there still is no vaccine or cure. Current approaches to reach a generation free of HIV must focus on ensuring broad and sustained access, uptake, and retention of care, treatment, and prevention services. This can only be achieved through QI. Our efforts must extend beyond traditional QI focus on clinic services to broader improvement of our work, from how we design and implement programs and research to how we track finances and team performance. Every aspect of our work should be subject to some degree of QI.

How do you see the global evolution of quality in the HIV/AIDS field and, in particular, at the organizational level?

QI was formerly focused only on the quality of services at clinic level. There has been a dramatic expansion of QI to all levels of programmatic work, and even to every aspect of EGPAF's organizational support functions. For EGPAF to achieve maximum impact and remain a preferred global health implementer, these broad QI efforts are an absolute necessity. Achieving our mission requires commitment to QI.

DR. IBRAHIM KIRUNDA

What accomplishment are you most proud of in your work?

Having participated in the National QI Coordination Committee to develop and finalize Uganda's National QI Framework and Strategic Plan, the goal of which is to ensure all people in Uganda have access to quality health care services by 2020. This involves the provision of accessible and equitable services with optimal professional performance, taking into account available resources and achieving consumer satisfaction.

What do you feel is the biggest challenge to ensuring that QI activities are sustained at the facility level and driven by health workers themselves?

The biggest challenge is the continuous transfer of staff in and out of our health system. This is a challenge which exists in most resource-limited settings—retaining trained health staff has long been a major challenge for HIV service implementers. For QI to work at site-level, a team of health workers (QI "champions") needs to prioritize quality: monitoring data, using QI methodology to find and address gaps, and monitoring the progress of tested changes. However, with a constant loss of staff, new health workers must be trained and retrained, requiring technical assistance agencies, such as EGPAF, to dedicate a high level of effort to QI training. Retaining trained staff at sites would go a long way to ensuring uninterrupted ownership of QI at sites.

Do you have any advice for others working in the field on how to develop and support a sustainable national QI program at all levels of health care?

QI teams at all levels need to be prepared and empowered to meet the demands of running QI projects or activities with ongoing education, weekly debriefings, review of problems solved / best practices, and ongoing monitoring and feedback loops. To truly improve the quality of services in our health systems, data and documentation must also be constantly prioritized and supported. Having designated staff in charge of this work at all levels is a necessity.

Acknowledgement

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