



Elizabeth Glaser
Pediatric AIDS
Foundation

*Until no
child has
AIDS.*

PARTNERSHIP FOR HIV-FREE SURVIVAL PROGRAM BRIEF





ELIZABETH GLASER PEDIATRIC AIDS FOUNDATION – TANZANIA

The Elizabeth Glaser Pediatric AIDS Foundation (EGPAF) is a nonprofit organization supporting activities in 19 countries and at more than 5,300 sites around the world. EGPAF's global mission is to end pediatric HIV and AIDS by implementing HIV prevention, care, and treatment programs; further advance innovative research; and execute strategic and targeted global advocacy to support the health and lives of women, children, and families worldwide.

EGPAF has worked in Tanzania since 2003, supporting the government in its efforts to increase access to high-quality, comprehensive prevention of mother-to-child transmission (PMTCT) and HIV care and treatment services. Aligned with Tanzania's national HIV program policies, EGPAF has earned recognition as a leader in providing high-quality technical assistance in several regions of the country. Working in close partnership with the Ministry of Health, Community Development, Gender, Elderly, and Children (MOHCDGEC),* EGPAF works at the national, regional, district, and community levels to increase access to quality HIV services, strengthen health systems, and build health worker and program manager capacity to implement strong HIV and AIDS programs.

* Renamed from the Ministry of Health and Social Welfare in 2015.

BACKGROUND AND PURPOSE OF PARTNERSHIP FOR HIV-FREE SURVIVAL

The Partnership for HIV-Free Survival (PHFS) was launched in March 2013 by the World Health Organization (WHO) and the U.S. President's Emergency Plan for AIDS Relief (PEPFAR). This initiative sought to assist six countries[†] in their national efforts to improve PMTCT, maternal and infant care, and nutrition support for HIV-positive women and their exposed infants using a collaborative quality improvement (QI) approach whereby teams from several health facilities and district health management team's work with each other to implement changes that lead to lasting improvement. The initiative specifically focused on improving postnatal care (PNC) utilization among women and children, as well as improved health outcomes related to stronger nutrition counseling. The ultimate goal of this project was to increase HIV-free survival by focusing on four steps in the continuum of care for mothers and infants (see Figure 1) in all six countries.

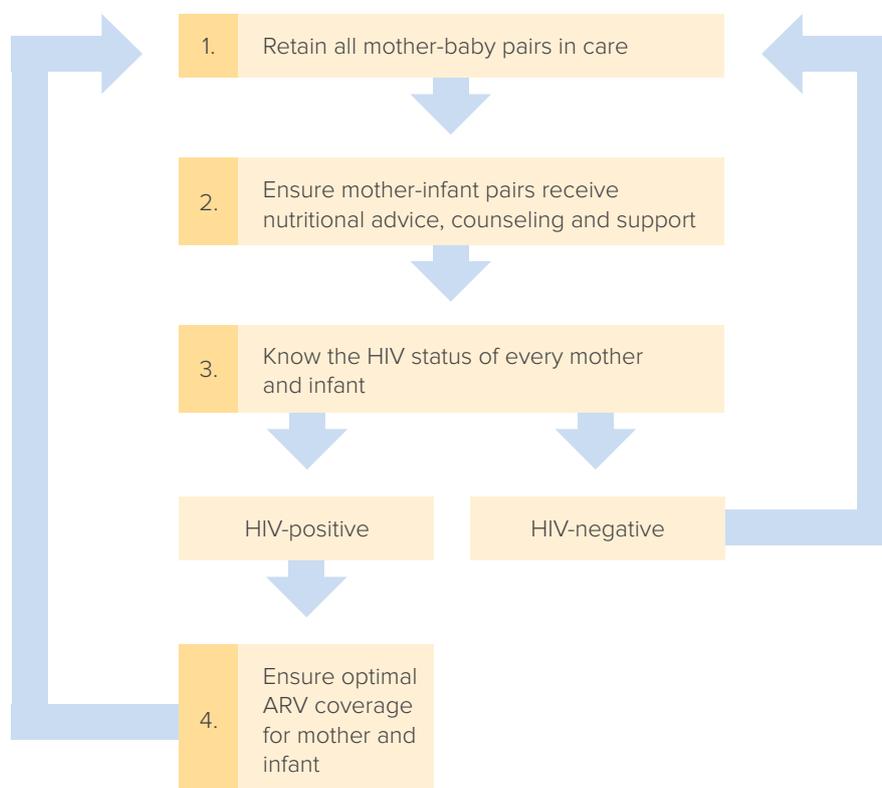


Figure 1. Four steps toward HIV-Free Survival

In Tanzania, the PHFS initiative specifically aimed to improve enrollment in and retention of HIV-positive pregnant and lactating women on antiretroviral therapy (ART), strengthen access to early infant diagnosis (EID), and increase the number of women practicing safe infant and young child feeding (IYCF) measures (including exclusive breastfeeding for the first six months of life).

[†] Tanzania, Kenya, Uganda, Mozambique, Lesotho, and South Africa.

The three main objectives of PHFS in Tanzania are as follows:

1. **Maternal, newborn, and child health (MNCH):** Strengthen comprehensive PNC at facilities with strong linkages to the community
2. **Nutrition assessment, counseling, and support (NACS):** Strengthen nutrition services along the continuum of care (maternal nutrition, promotion of optimal IYCF practices)
3. **Quality Improvement (QI):** Establish evidence on the effectiveness of key interventions

A national protocol on PHFS was developed in 2013 by an MOHCDGEC-led PHFS steering committee to provide broad guidance to implementing partners on the development of innovative interventions to eliminate new HIV infections among children and improve the health of mother-baby pairs. The protocol guided health partners engaged in PHFS to develop capacity-building initiatives for QI approaches at facilities to improve the reliability and quality of care, scale-up site-level interventions to strengthen care and nutrition of HIV-infected pregnant women and their infants in the context of comprehensive postpartum care, develop a multicountry learning network that discusses and documents programmatic challenges and successes, and develop a common evaluation framework to rigorously assess the effectiveness of interventions. In Tanzania, the program was implemented in three districts (Nzega, Mufindi and Mbeya Urban districts). The partners selected these districts because of their high rates of HIV prevalence and low rates of retention in care among HIV-positive pregnant and lactating mothers. Starting in October 2013, the initiative was implemented in 10 health facilities in each district. It was expanded to an additional 20 sites per district in April 2015.

The three PMTCT implementing partners (EGPAF, Deloitte Consulting – Tunajali II program, and Baylor International Pediatric AIDS Initiative) provided site-level support for implementation of the initiative, while the United States Agency for International Development (USAID)-funded Applying Science to Strengthen and Improve Systems (USAID/ASSIST) project by University Research Co. (URC) provided QI technical assistance to the PHFS partners. Other technical assistance partners included Jhpiego for PNC and FHI360/FANTA (Food and Nutrition Technical Assistance project) for nutrition. The initiative is coordinated by the MOHCDGEC Reproductive and Child Health Section (RCHS) PMTCT unit, while linking with other MOHCDGEC sections, namely the Health Services Inspectorate and Quality Assurance Section and the Tanzania Food and Nutrition Centre. A national steering committee was formed, chaired by the PMTCT unit of the MOHCDGEC, to provide guidance and monitoring/oversight of the initiative (Figure 2). In addition to the above-mentioned implementing partners, WHO, United Nations Children’s Fund, and USAID were represented, as well.

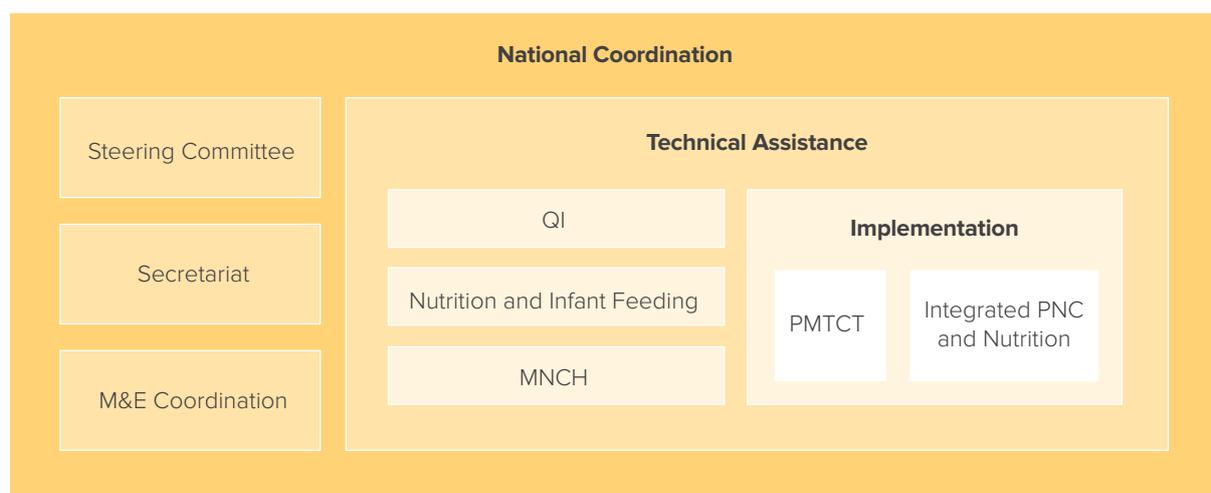


Figure 2. Organization of PHFS Initiative in Tanzania

EGPAF'S WORK IN PARTNERSHIP FOR HIV-FREE SURVIVAL

EGPAF implemented the PHFS initiative under the umbrella of the main USAID-funded LIFE Program, building on the existing PMTCT platform and leveraging its resources. LIFE aims to better guide women through a continuum of care from pregnancy through PNC. EGPAF has played a dual role in the PHFS program in Tanzania. In addition to being the lead PMTCT implementing partner in one of the three selected districts (Nzega), EGPAF was appointed as secretariat and host of the national PHFS steering committee to oversee and coordinate effective implementation of the PHFS initiative across the country. The national steering committee meets on a monthly basis, with the frequency later reduced to bimonthly. The steering committee tracks implementation of activities, reviews quarterly progress reports, and aligns the quarterly work plan of partners with targets. As secretariat, EGPAF coordinated the national PHFS learning platform, where implementing partners, district councils, and health facility staff shared experiences and best practices. Three national platforms were held; the first was at the national level, while the participating districts hosted the other two to allow hands-on experience sharing and give health facilities the opportunity to demonstrate their work.

As an implementing partner in PHFS, EGPAF rolled out the initiative in October 2013 at 10 health facilities in Nzega District, Tabora Region. HIV prevalence in Nzega District is 5.2%. Among pregnant women in antenatal care (ANC), 4.2% test HIV-positive. Facilities in this region report low retention in care among HIV-positive pregnant and lactating mothers (see Table 1). Tracking of mother and infants, including HIV infected/exposed mother-baby pairs along the continuum of care, enrollment of HIV-positive infants in ART, and general use of PNC services among all women has been a challenge due to the lack of integration of reproductive and child health (RCH) care and ART services, inadequate identification, poor documentation, and weak linkages between health facilities and communities).

In April 2015, EGPAF expanded the initiative to another 20 health facilities in Nzega. This was a result of the first national learning platform, where the participants decided on and defined scale-up.

Table 1. National Data (District Health Information System 2015/2016)

proportion of pregnant women enrolled in ANC	98%
proportion of women who attended at least 4 ANC visits during their pregnancy	51%
proportion of women who delivered in a health facility	60%
proportion of women who received PNC within 48 hours postpartum	32%
proportion of women who exclusively breastfed for 6 months	59%

PHFS Approach at Site Level in Nzega

Quality Improvement

The PHFS initiative aimed to identify lessons learned and best practices to further strengthen integration of HIV services within MNCH settings. To accomplish this, PHFS applies a QI framework as developed by the URC-led USAID/ASSIST project, which follows a “plan-do-study-act” cycle that entails the use of data to analyze service delivery processes and inform changes, with changes applied through small, incremental tested and tweaked activities to achieve improvements. In October 2013, 90 health care workers (mostly nurses and some clinicians) from the 10 facilities in Nzega were trained and mentored on the use of QI methodologies. Facility-based work improvement teams were established to take responsibility for the implementation of QI interventions. Each site kept a QI journal to plot the progress made on the selected indicators and record the tested changes. EGPAF and Nzega’s Council Health Management Team offered support through monthly coaching visits to the PHFS sites. With facilitation by EGPAF and the USAID/ASSIST project, CHMT also conducted quarterly collaborative learning sessions involving all 10 PHFS sites within the district. Through these, health facility QI teams shared with other health facility teams the changes they had implemented and the results, and they also helped one another identify solutions for issues noted through QI to ultimately enable strengthened care for mother-infants pairs.

After the QI training/orientation, health facilities used the QI methodology to identify and implement several interventions to address challenges affecting a continuum of care for mother-baby pairs. Tested changes focused on strengthening follow-up of mother-baby pairs by introducing MNCH community health workers, providing integrated community-based MNCH support, integrating MNCH service delivery at the RCH clinic, including PMTCT and early infant diagnosis (EID), and scaling up nutrition assessment counseling and support in the PNC period. Some interventions aimed at improving the continuum of care for all mother-baby pairs, while others targeted HIV-positive mother-baby pairs, specifically.

To ensure postnatal follow-up of mother-baby pairs and promote a postpartum continuum of care, the 10 facilities decided to register mother and baby as pair and schedule a combined next appointment for PNC. To facilitate follow-up of HIV-exposed infants, health staff opened an HIV-exposed infant card as soon as a pregnant woman was identified as HIV-positive; this card was stapled to the mothers’ care and treatment card[‡] so that after the birth the HIV-infected mother and her HIV-exposed infant could be followed as a pair. Additionally, on a weekly basis, health facility staff reviewed the MNCH registers to identify pregnant women who should have delivered and been seen for postnatal follow-up but had not come to the health facility.

Capacity-Building

EGPAF, working with the consortium partners, provided training to roughly 400 clinic staff on various subjects, including QI, NACS, community health worker MNCH provision, and the mHealth platform. These training sessions were informed by QI, with the ultimate goal to scale-up use of PNC among all women, increase retention in treatment among HIV-positive women, and improve nutritional outcomes among mother-baby pairs (see Figures 3, 4 and 5).

PNC Capacity-Building

Sixty-eight health workers participated in a six-day training program to enhance their knowledge and skills on PNC for mothers and their newborns, including feeding options, postpartum family planning, and care and follow-up of HIV-positive mothers and HIV-exposed infants.

[‡] These “cards” are site-level tools that are used to identify the health needs of each individual patient. Stapling the card of an HIV-exposed infant to the mother’s patient chart allows health workers to track the two as a single unit and follow their care more easily.

HIV-infected women and children are at increased risk of malnutrition, which contributes to low birth weight and increased risk of complications and death among newborns. To address poor maternal nutrition, 80 nurses and clinicians were also trained on nutrition assessment, counseling, and support. In addition to the above formal training sessions using the national curricula, the EGPAF program team supported the health facilities with orientation and on-the-job training to further enhance services. At each site, medical attendants (a junior support cadre at each site) were oriented in the identification of HIV among infants with unknown exposure status and HIV-exposed infants at immunization services or well child clinics for enhanced enrollment in care and treatment services. Health care workers also received on-the-job training in psychosocial support and facilitation of mother support groups for HIV-positive pregnant women as a strategy to promote retention in care and ensure adherence to ART.

MNCH Community Health Worker Capacity-Building

Community health workers play a vital role in supporting the continuum of care of mother-baby pairs. In support of the national strategy for integrated community MNCH services, EGPAF trained 110 home-based care providers across all 30 sites to expand their scope of work, thus creating a new, integrated cadre of community health workers that promote and support MNCH in the community. HIV-positive mother-baby pairs are proactively linked to a community health worker for postpartum follow-up and support, including NACS. MNCH community health workers, supervised by site managers, trace mother-baby pairs not returning to the health facility for postnatal services follow-up to ensure that they access MNCH services essential to HIV-free survival, including comprehensive HIV testing, care, and treatment.

Integrated MNCH community health worker services

- Mapping of households; identification and referral of pregnant women
- Promotion of institutional delivery
- Promotion of exclusive breastfeeding for 6 months
- Tracing and referral of defaulting pregnant women and mother-baby pairs
- Nutrition assessment and counseling; referral for support
- Monthly data reporting at health facility

mHealth: Moby App for Decision Support and Appointment Reminders

EGPAF also applied an innovative mHealth technology to improve the quality of service delivery and to facilitate better monitoring of mother-baby pairs. The Moby App is an innovative Android-based tool designed to provide decision support for health staff according to national care protocols and to create an electronic patient record at the point of care, linking the mother's and baby's health records and enabling the tracking of mother-baby pairs across MNCH and HIV services. Each pregnant woman starting ANC, regardless of HIV status, is registered in a phone-based electronic record. This phone-based app is then used to prompt a nurse to provide (and record) a step-by-step assessment of all findings in the mother's health record. Similarly, the tool provides support to nursing staff for postpartum visits for mother-baby pairs. The system also registers, tracks, and provides decision support for PMTCT prophylaxis for the newborn and HIV testing after six weeks. The Moby App sends automated SMS reminders to clients, reminding them of upcoming appointments, missed appointments, and approaching delivery dates so women can prepare to deliver in a health facility. The application is currently fully functional at all 30 PHFS sites in Nzega. Health staff received on-site orientation and mentoring on the use of the system. Since April 2014, when the tool was launched, more than 17,000 pregnant women have been registered using the Moby App.

Table 2. Summary of tested changes to improve continuum of care for HIV-negative and HIV-positive mother-baby pairs

All mother-baby pairs	HIV-positive mother-baby pairs
<ul style="list-style-type: none"> • Set specific appointment dates and write on mother's RCH card • Combine baby's vaccination visit at 6 weeks with mother's PNC visit at 42 days postpartum • Actively trace mother-baby pair when an appointment was missed, using mobile phone and community health workers 	<ul style="list-style-type: none"> • Combine HIV follow-up and care visit for mother and infant • Staple mother's HIV care and treatment card and exposed-infant card together at time of diagnosis • Link HIV-positive mother with community health worker at time of diagnosis • Actively trace HIV-positive mother-baby pair when an appointment was missed, using mobile phone • Allocate specific "family day" for fathers, mothers, and their babies to receive HIV care together



RESULTS

The package of changes implemented by health facilities resulted in marked improvements in follow-up of mother-baby pairs. The percentage of mothers attending all four standard PNC visits rose from less than 10% in early 2014 to more than 90% less than one year later at the original 10 PHFS sites. Following the tested changes, a similar trajectory, from 10% to over 70%, was reported at all 20 scale-up sites within five to six months (Figure 3).

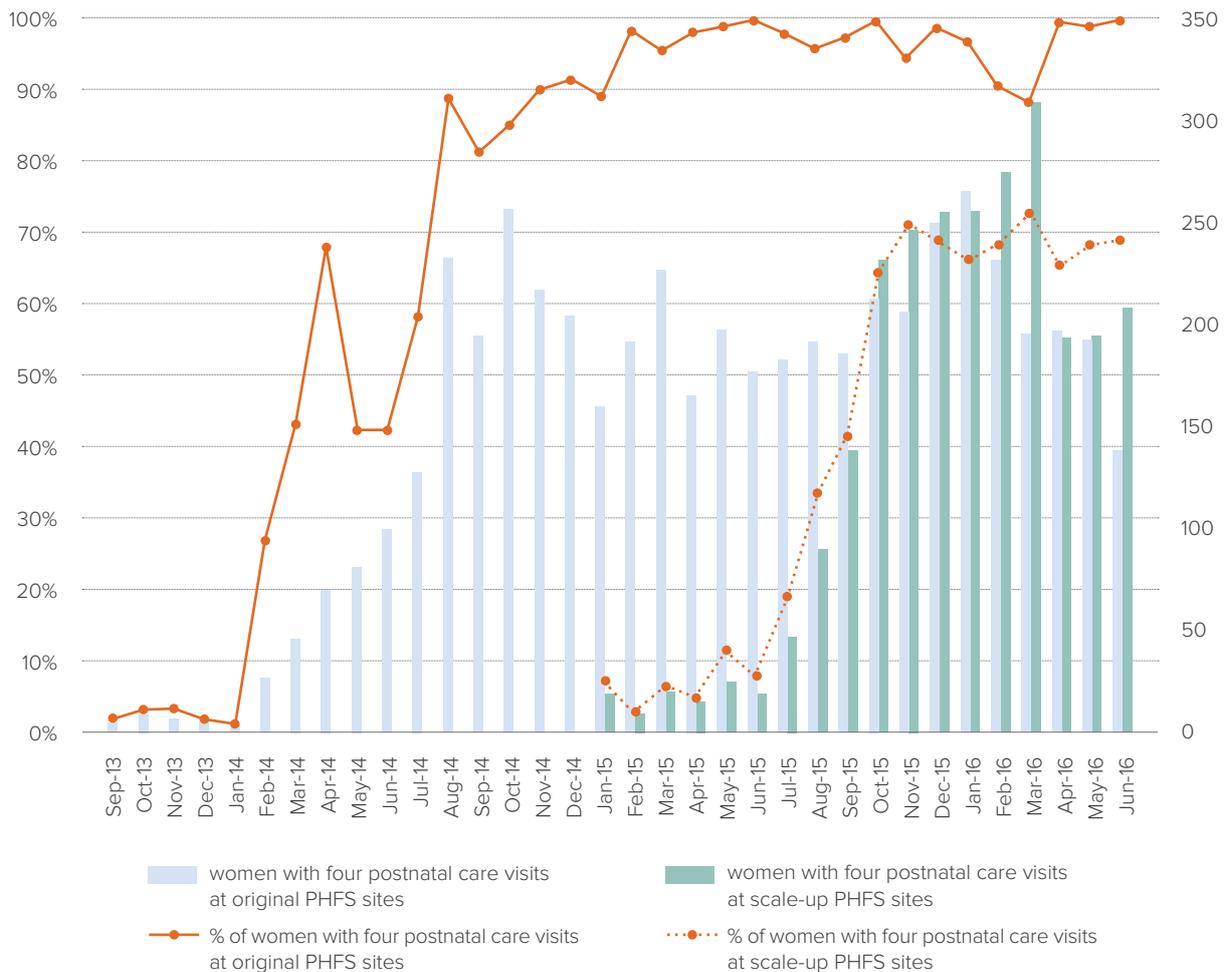


Figure 3. Number and percentage of mothers attending all four PNC visits, at 10 original and 20 scale-up PHFS sites

HIV-positive mother-baby retention* rose from about 20%–40% to more than 90% within 6–12 months (Figure 4), and an increase in the number of HIV-positive mothers receiving nutrition assessment, counseling, and support (NACS) services was seen, from less than 10% to more than 90%, within 6–9 months for both original and scale-up sites (Figure 4). A total of 566 moderate acute malnutrition and 252 severe acute malnutrition (SAM) cases were identified, and 196 SAM clients received ready-to-use therapeutic food.

* Retention is measured every month, based on the cumulative number of women who are supposed to attend services that month.

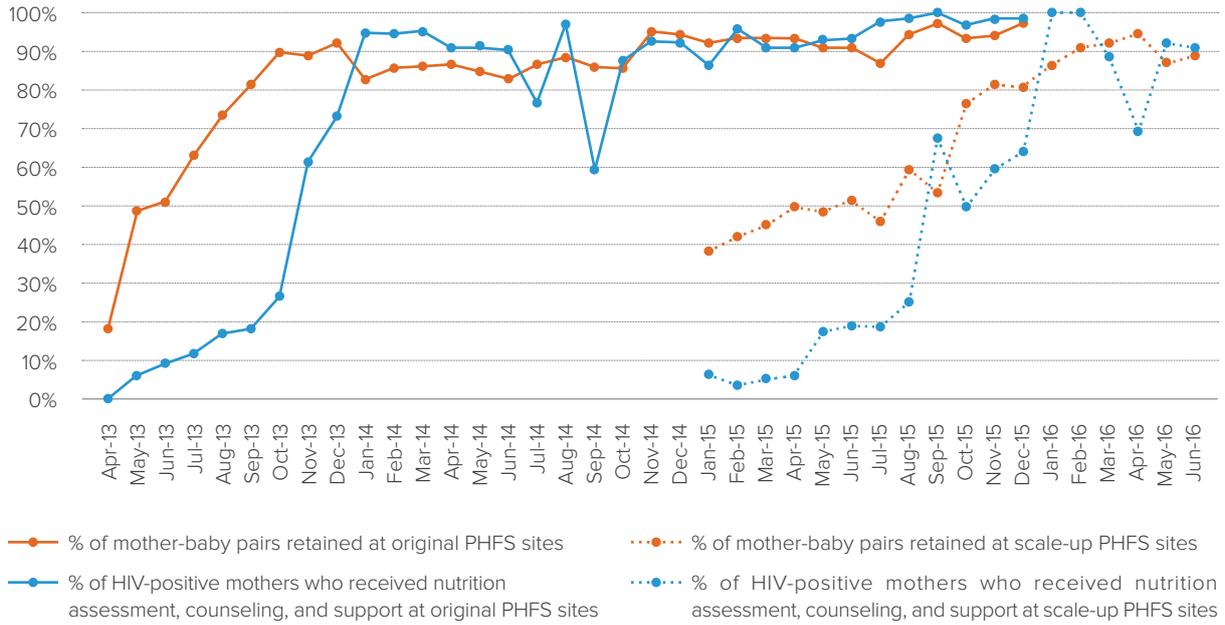


Figure 4. Percentage of HIV-positive mother (M) / HIV-exposed baby (B) pairs retained and HIV-positive mothers receiving NACS, at 10 original and 20 scale-up PHFS sites

During the initiative, significant improvement was seen in the EID cascade. The percentage of caregivers of HIV-exposed infants receiving EID results increased from 39% in late 2014 to 97% by late 2015 (see Figure 5). While the other indicators showed a steady improvement, this indicator had a more variable improvement pattern due to erratic availability of test kits.

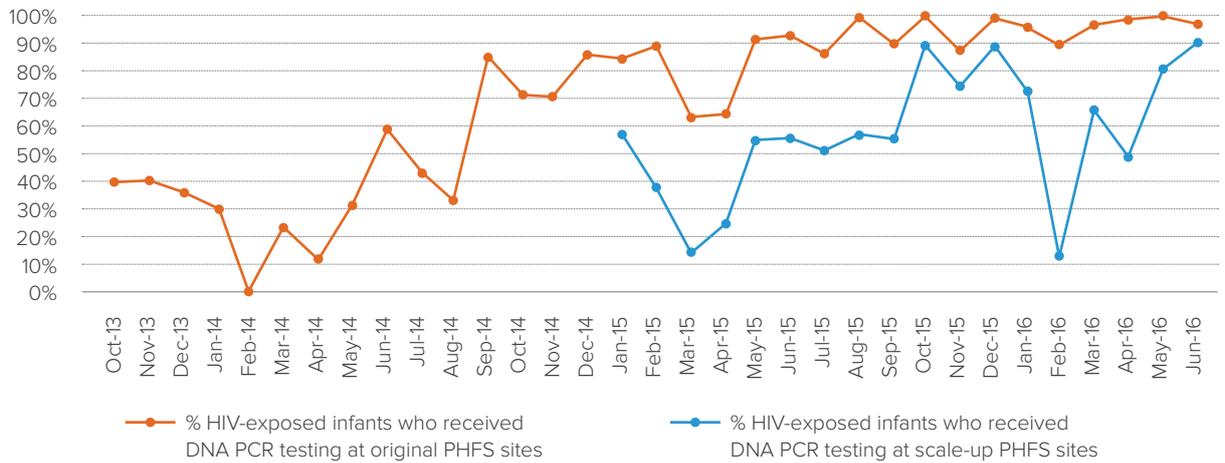


Figure 5. Uptake of EID: percentage of HIV-exposed infants who received DNA polymerase chain reaction (PCR) testing at 10 original and 20 scale-up PHFS sites

Under PHFS, community health workers played an important role in promoting health and well-being and reducing MNCH mortality by bringing health services and information closer to mothers, families, caretakers, and the entire community. In Nzega, 184 community MNCH workers are currently conducting household visits and community meetings to promote clinic attendance and facility delivery, provide birth planning counseling, and promote the use of insecticide-treated nets.



LESSONS LEARNED

- **The importance of applying QI to achieve results as the basis of successful PHFS**

Key to the success of the PHFS initiative were the investments made in building capacity for QI among health staff and CHMT and the collaborative approach to QI, which included site-level, district-level, and national-level learning sessions. This approach allowed QI teams to share and learn from each other during implementation, facilitating sharing and the rapid spread of tested changes to additional sites, demonstrating the scalability of the tested changes, and enhancing/expanding their impact. The regional learning sessions also introduced an element of healthy competition, encouraging QI teams to identify creative interventions and achieve improvement. Support to QI teams through monthly coaching encouraged site staff to regularly look at their data, assess the progress of improvements, and make course corrections, as needed.

- **A need to embed QI in routine country-level health tracking systems**

The use of data to identify gaps in implementation has proven helpful in guiding program improvements, but it has been a labor-intensive process. Programs need to strike a balance for health care workers between service delivery and reporting. Using data in a meaningful way calls for greater efficiency, looking at innovative and digital technologies to reduce the burden of data collection and reporting, and linking indicators to the national system to facilitate data analysis.

- **Leveraging the PMTCT platform to improve broader MNCH services**

While the PHFS initiative focused primarily on improving the continuum of care for HIV-positive mother-baby pairs, it applied a holistic approach geared toward all mother-baby pairs regardless of HIV status. The initiative contributed to improving HIV prevention, care, and treatment outcomes and improved uptake of MNCH services, generally.

- **Synergies between programs through a partnership and national coordination**

PHFS was led by the MOHCDGEC through national-level meetings and the national steering committee. This collaborative approach provided partners a forum to align priorities and leverage each other's resources to develop joint activities (e.g., the use of PMTCT implementing partners' presence at the site level to widen the scope of support and offer integrated services within the broader MNCH setting and general trainings of service providers).

- **Shared learning through national learning platform**

The national learning platform allowed the MOHCDGEC, implementing partners, CHMT, and health facility staff, including community health workers, to come together to share their different experiences with the implementation of various quality improvement interventions, allowing effective interventions to be broadly adopted by other sites.

FUTURE DIRECTION

The intent of PHFS was to identify effective program interventions to improve the continuum of care for mother-baby pairs using QI methods and collaborative learning. Using this approach, a set of tested changes considered most effective in improving the weakest areas within the continuum of care were identified at the site level and shared more broadly for further scale-up within the region. This collaborative learning approach, with quarterly learning sessions and monthly coaching visits, led to improvements to this continuum of care.

PHFS is not a static initiative and, over the years, the needs have changed. While PHFS has concentrated on how to improve processes, the time has come to shift the focus to health outcomes and measure final HIV-free survival. The QI approach is an iterative process, and through the plan-do-study-act cycles new QI indicators have been established and new tested changes developed. While the PHFS initiative provided an opportunity to reinforce the QI approach with additional resources, there is a need to embed QI within the routinely planned and budgeted activities under the Comprehensive Council Health Plans in order to sustain the gains.

The lessons learned from PHFS implementation need to be captured at the national level and become harmonized and integrated within existing guidelines. The tested changes will be packaged and disseminated through the various MOHCDGEC forums, such as national technical working groups and council and regional health management teams, so that further implementation of promising practices continues. Other future directions of PHFS will include analyses of impact data, such as testing and diagnosis rates at 18-months and HIV-free survival.

EGPAF TANZANIA

Plot #8 & 10, Off Haile Selassie Road
Oyster Bay
Dar Es Salaam, Tanzania

P +255 22 260 1692

WWW.PEDAIDS.ORG



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