



THE REPUBLIC OF UGANDA
MINISTRY OF HEALTH

The Partnership for HIV-Free Survival in Uganda: Experience and Lessons Learned

May 2018



Foreword

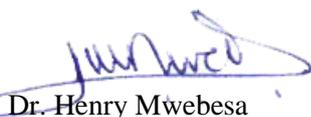
To achieve the goals of the *Global Plan Towards the Elimination of New HIV Infections among Children by 2015 and Keeping Their Mothers Alive*, the Partnership for HIV-Free Survival (PHFS) was implemented between 2012 and 2014 in six countries with a high HIV burden: Kenya, Lesotho, Mozambique, South Africa, Tanzania, and Uganda. The PHFS initiative aimed to accelerate implementation of the World Health Organization (WHO) 2010 guidelines on elimination of mother-to-child transmission (eMTCT) of HIV/AIDS, focused on infant feeding in the context of HIV care. In Uganda, the PHFS initiative focused on reducing MTCT from 15 percent to less than 1 percent of HIV-exposed children under 2 years and increasing adherence to recommended infant and young child feeding (IYCF) practises to 80 percent by 2015. It also aimed at utilising Nutrition Assessment, Counselling, and Support (NACS) to improve maternal and infant nutrition during the window of opportunity, and encourage exclusive breastfeeding for all mothers, including for HIV+ mothers treated through Option B+. The Ministry of Health (MOH), the United States Agency for International Development (USAID), and the Centre for Disease Control and Prevention (CDC) through the President's Emergency Plan for AIDS Relief (PEPFAR), and partners—Food and Nutrition Technical Assistance III Project (FANTA), USAID Applying Science to Strengthen and Improve Systems Project (ASSIST), Strengthening Partnerships, Results, and Innovations in Nutrition Globally Project (SPRING), The AIDS Support Organization (TASO), Strengthening TB and HIV/AIDS Response in East Central Uganda (STAR-EC), and Strengthening TB and HIV/AIDS Responses in the Southwest Region of Uganda (STAR-SW)—supported national efforts to develop and scale up interventions to provide optimal nutrition for infants and their mothers and to protect infants from HIV infection. The PHFS initiative was implemented in 24 health facilities (from 2013) and later expanded to 108 health facilities (2014 to 2015) in 6 districts: Jinja, Kisoro, Manafwa, Namutumba, Ntungamo, and Tororo. (The timeline of implementation is highlighted in Annex 9).

The initiative focused on integrating NACS into eMTCT using quality improvement (QI) approaches. Twenty-one performance indicators highlighted in Annex 7 were tracked during PHFS implementation. The key strategies used were: capacity strengthening for service providers for eMTCT, NACS, and QI; creating demand for NACS within mother/child health service points; strengthening the health service delivery system to integrate NACS into eMTCT interventions; using QI science to integrate NACS and eMTCT service delivery for eligible mothers and babies; and strengthening monitoring and evaluation for NACS within eMTCT/maternal and child health and nutrition settings.

The PHFS increased retention of mother-baby pairs in care at key pilot sites from 2.2 percent in 2012 to over 60 percent in 2014 and helped increase adherence to IYCF practises from an average of 74.8 percent in February/March 2013 to 97.4 percent in June 2014 (MOH 2014). The initiative facilitated the process of having the 21 nutrition indicators incorporated into the Uganda Health Monitoring and Information System (HMIS), there was increased demand for NACS and eMTCT services, NACS was integrated into health service delivery, and improvements were registered in data quality and collection. These results contributed to improved quality of care through improvements in adherence to Option B+, optimal IYCF feeding practises, and reduction of HIV transmission to infants.

Drawing from these results, I therefore call upon all stakeholders to support this effort in the hope that it can be scaled up countrywide, particularly through the scale up of the change package for improving retention of mother-baby pairs, scale-up of the change package of data quality management, and ensuring that NACS integration at all service delivery points is strengthened.

For God and My Country



Dr. Henry Mwebesa

AG. DIRECTOR GENERAL HEALTH SERVICES

Acknowledgements

The Ministry of Health would like to extend its gratitude to all the partners and stakeholders in the Partnership for HIV-Free Survival (PHFS) that contributed to the implementation of the project and the generation of this report. Much appreciation goes to the U.S. Agency for International Development (USAID) for its financial and technical support to the PHFS. In the same vein, we are grateful to the Institute for Healthcare Improvement, the United States President's Emergency Plan for AIDS Relief, the U.S. Centers for Disease Control and Prevention, and MEASURE for their support of the PHFS.

Special thanks go to all the implementing partners that contributed to the successful implementation of the PHFS project and the generation of this report, including: the Food and Nutrition Technical Assistance III Project (FANTA); the USAID Applying Science to Strengthen and Improve Systems Project (ASSIST); Strengthening Partnerships, Results, and Innovations in Nutrition Globally Project (SPRING); The AIDS Support Organization (TASO); Strengthening TB and HIV & AIDS Response in East-Central Uganda Project (STAR-EC); and Strengthening TB and HIV & AIDS Response in the Southwest Region of Uganda (STAR-SW) Project.

The Ministry of Health is grateful to the six districts of Jinja, Namutumba, Manafwa, Tororo, Ntungamo, and Kisoro; the health facilities in these districts that participated in the PHFS; and the mothers and children who used the services.

Sincere appreciation goes to Dr. Hanifa Bachou, Pauline K. Okello, and Anita Komukama (FANTA), and Dr. Denis Muhangi (consultant), who conducted field consultations and compiled this report.

Last but not least, the tireless efforts of Dr. J. Musinguzi, Dr. Sarah Byakika, Ms. Samalie Namukose, Dr. Edgar Kansiime, and Dr. Linda Nabitaka, who provided technical input and coordinated the initiative with the members in Annex 10, are greatly appreciated.

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Acronyms

AIDS	Acquired Immunodeficiency Syndrome
ANC	Antenatal Care
ART	Antiretroviral Therapy
ARV	Antiretroviral
CDC	Centers for Disease Control and Prevention
CLF	Community Linkage Facilitator
DHO	District Health Officer
DHIS	District Health Information System
DHT	District Health Team
DNCC	District Nutrition Coordination Committee
DQA	Data Quality Assessment
EGPAF	Elizabeth Glaser Pediatric AIDS Foundation
EID	Early Infant Diagnosis
eMTCT	Elimination of Mother-to-Child Transmission (of HIV)
FANTA	Food and Nutrition Technical Assistance III Project
FSG	Family Support Group
HC	Health Center
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
IEC	Information, Education, and Communication
IHI	Institute for Healthcare Improvement
IYCF	Infant and Young Child Feeding
M&E	Monitoring and Evaluation
MCH	Maternal and Child Health
MEASURE	Monitoring and Evaluation to Assess and Use Results
MOH	Ministry of Health
MUAC	Mid-Upper Arm Circumference
NACS	Nutrition Assessment, Counselling, and Support
OPD	Outpatient Department
PCR	Polymerase Chain Reaction
PEPFAR	United States President's Emergency Plan for AIDS Relief
PHFS	Partnership for HIV-Free Survival
PMTCT	Prevention of Mother-to-Child Transmission
PNC	Postnatal Care
QI	Quality Improvement
RDQA	Routine Data Quality Assessment
RHITES- SW	Regional Health Integration to Enhance Services in South Western Uganda
RUTF	Ready-to-Use Therapeutic Food
SNCC	Sub-county Nutrition Coordination Committee
SPRING	Strengthening Partnerships, Results, and Innovations in Nutrition Globally
STAR-EC	Strengthening TB and HIV & AIDS Response in East-Central Uganda
STAR-SW	Strengthening the TB and HIV/AIDS Response in the Southwest Region of Uganda
TASO	The AIDS Support Organization
USAID	U.S. Agency for International Development
USAID ASSIST	Applying Science to Strengthen and Improve Systems

USG
VHT
WHO

United States Government
Village Health Team
World Health Organization

Key Definitions

Changes: Actions that improvement teams take that are expected to lead to improvement.

Change package: A set of evidence-based interventions and changes that have been tested to yield improvement, including instructions for teams on how to implement each change.

Standard care package: A defined set of services that every mother-baby pair should receive at routine visits to the facility, including antiretroviral therapy (ART) for the mother, cotrimoxazole for the baby, nutrition assessment for both mother and baby, counselling on infant and young child feeding (IYCF), and an appointment for the next visit. Source: USAID ASSIST

Spread: To (cause to) cover, reach, or have an effect on a wider or increasing area. It's a planned and targeted dissemination of an intervention. It can be a horizontal or vertical spread. For the PHFS Initiative, spread was vertical.

Executive Summary

The Partnership for HIV-Free Survival (PHFS) is a multi-country collaboration to accelerate implementation of the World Health Organization's (WHO) 2010 guidelines on the prevention of mother-to-child transmission (PMTCT) of HIV/AIDS, which focus on infant feeding in the context of HIV care and treatment. Launched by WHO and the United States President's Emergency Plan for AIDS Relief (PEPFAR) through USAID and the Centers for Disease Control and Prevention (CDC); the initiative was implemented between 2012 and 2014¹ in six countries with a high HIV burden: Kenya, Lesotho, Mozambique, South Africa, Tanzania, and Uganda. The initiative's overall goal was to increase HIV-free survival of infants born to HIV-infected mothers.

The PHFS in Uganda consisted of the Ministry of Health (MOH) and six U.S. Government (USG)-funded implementing partners: Food and Nutrition Technical Assistance III Project (FANTA), USAID Applying Science to Strengthen and Improve Systems Project (ASSIST), Strengthening Partnerships, Results, and Innovations in Nutrition Globally Project (SPRING), The AIDS Support Organization (TASO), Strengthening TB and HIV/AIDS Responses in East Central Uganda (STAR-EC), and Strengthening TB and HIV/AIDS Responses in Southwest Uganda (STAR-SW). The MOH provided overall leadership and coordination, assisted by FANTA, and USAID ASSIST was responsible for capacity strengthening and technical assistance in quality improvement (QI) approaches. TASO and SPRING supported district-level implementation, with SPRING also collaborating with STAR-SW and STAR-EC. The implementing partners worked closely with district teams, health workers, and community-based workers.

The PHFS was piloted in 24 health facilities in six districts that had a high volume of clients with HIV/AIDS and were rolling out the Option B+ approach to eMTCT (Option B+ offers lifelong ART to HIV-positive pregnant women, lowers lifetime transmission rate, leads to less risk of resistance, enables safer breastfeeding, and provides continuity of treatment throughout childbearing years). The initiative was scaled up after 1 year to a total of 108 health facilities in the same districts. Implementation focused on integrating nutrition assessment, counselling, and support (NACS) into eMTCT using QI approaches. The key strategies used were strengthening the capacity of service providers, creating demand for NACS, improving the health service delivery system, strengthening monitoring and evaluation (M&E) for NACS within eMTCT and maternal/child health and nutrition settings, and conducting advocacy. Key monitoring activities included a baseline survey, a data quality assessment, supportive supervision visits, quarterly review meetings, and experience-sharing and 'harvest' meetings to capture best practises. Other implementation activities included coaching and mentorship for service providers and provision of anthropometric equipment. Facility-level interventions included activation of quality improvement (QI) teams, provision of NACS, mother-baby pairing, support to patients at critical clinic points of care, and working with community-based volunteers to ensure follow-up and referral of mothers.

Using the QI framework, 'change packages' consisting of a list of recommended changes in the service delivery process and in data management were formulated and tested by the implementing health teams. Progress of implementation and results from the changes tested were regularly shared at the learning sessions, review meetings, and coordination meetings. The in-country PHFS partners eventually developed guidance on improving retention of mother-baby pairs, which the MOH sanctioned for national application.

¹ In some countries, the PHFS continued beyond 2014; in other countries, parts of the initiative continued to be implemented after the main phase-out.

Achievements

The PHFS led to increased retention of mother-baby pairs in care in the 22 ASSIST-supported pilot sites² from 2.2 percent in 2012 to over 60 percent in 2014 (MOH 2014). This contributed to improved quality of care and reduction of HIV transmission to infants. The initiative also contributed to increased adherence to infant and young child feeding (IYCF) practises from an average of 74.8 percent in February/March 2013 to an average of 97.4 percent in June 2014, improved data quality and data collection, increased demand for NACS and eMTCT services, better equipped health facilities, and strengthened health structures. The use of QI approaches further led to system-wide performance improvements. Through the QI approach, the capacities of the health facility staff were strengthened to provide NACS and eMTCT services, and it contributed to the finalisation and launch of the health-sector quality improvement framework and strategic plan—2016/20 as well as the QI manual 2015. There was increased retention and adherence to care in the implementing health facilities and improved coordination among the key stake-holders that implemented the PHFS Initiative in Uganda. To date, other USAID implementing partners, such as USAID/RHITES-SW and RHITES EC, have continued to integrate NACS into eMTCT service delivery.

Enabling Factors and Constraints

Several factors enabled the success of the PHFS in Uganda, including a conducive policy environment, partnerships, leadership from MOH and a strong coordination mechanism, opportunities for sharing and learning, continuous engagement of all partners, and use of the QI approach. However, several constraints were encountered during implementation, including a delayed scale-up to more health facilities, late access to data collection tools and an initial disconnect with the national information system, non-functionality of the District Nutrition Coordination Committees (DNCCs) and Sub-county Nutrition Coordination Committees (SNCCs) in some districts, insufficient clarity about partners' roles and mandates, insufficient agreement on what interventions to prioritise, and a short implementation period. Other constraints included irregular meetings and webinars among the global partners and system-wide bottlenecks in Uganda, such as shortages of health workers, transfers of trained staff, and stock-outs of therapeutic foods and other supplies.

Best Practises and Lessons Learned

Some of the best practises from the PHFS include mother-baby pairing; working through existing structures; and the use of learning, sharing, and 'harvest' sessions for continuous learning and adaptation. The key lessons from the initiative were:

- Designing partnerships needs adequate involvement of all key partners from early stages to allow them time to negotiate their roles, responsibilities, mandates, and resources.
- Working in partnership requires regular information sharing, strong coordination, and mechanisms to keep partners motivated.
- Engaging district leadership starting from the pilot phase is essential to facilitate ownership and implementation.
- Shifting tasks to volunteers is key to reducing the workload of understaffed health facilities.
- Improving the retention of mother-baby pairs is the cornerstone of HIV-free survival.
- Innovative capacity strengthening approaches are crucial to mitigate the challenges of staff turnover in health facilities.

² USAID ASSIST chose to support only 22 of the 24 sites based on client volume at the sites and recommendations from the District Health Teams.

Recommendations

The following recommendations can be considered for any efforts to scale up the PHFS or to implement similar activities:

For Global Partners

- Future similar initiatives should ensure a more consultative process for design and scale-up.
- Global initiatives require regular meetings by all global partners.
- Future funding for similar initiatives should explore funding mechanisms under which the government takes the lead in the development, implementation, and monitoring of the plan, for better outcomes and accountability.

For the MOH

- The MOH and districts should ensure the sustainability and expansion of the effective practises introduced and supported through the PHFS. Partners that still have a presence in the districts should continue to support the changes initiated and promoted through the PHFS. The MOH also should ask non-PHFS partners to consider supporting the roll-out of changes, especially in the districts where these partners are already operating. In addition, the MOH should provide clear guidance to the districts so they can continue to implement the changes. To facilitate a well-managed national scale-up, the MOH should consider developing a clear scale-up plan with timelines and a minimum change package that all districts can implement without additional resources.
- The MOH should address the bottlenecks to the delivery of NACS supplies in eMTCT and maternal/child health and nutrition settings. This could include training, support supervision, mentorship, and coaching of health facilities and districts on integrating NACS into routine health service delivery and on management of acute malnutrition. In the long term, efforts should be made to streamline the purchase and distribution of nutrition commodities and supplies through the national supply chain.
- The MOH and its partners should ensure that the effective practises introduced and supported through the PHFS are sustained, expanded, and institutionalised through policies and guidelines. The MOH should liaise with the Ministry of Education and Sports to include the PHFS package (eMTCT, NACS, and QI) in the pre-service training of nurses and midwives.
- The MOH should include the PHFS indicators into the routine supportive supervision and mentorship tools.
- The MOH should routinely provide Health Management Information System (HMIS) tools that capture PHFS indicators.
- The MOH and its partners should promote shifting more NACS and eMTCT-related tasks to volunteers. They should conduct a retrospective study to both determine the PHFS initiative's impact on the number of HIV-related infant deaths in the implementing health facilities and to assess sustainability of the changes initiated through the PHFS 2 to 3 years after phase-out.
- The MOH should advocate and mobilise resources for scaling up the PHFS countrywide.
- The MOH should strengthen community linkages with health facilities in order to improve rates of service utilisation and health outcomes.

For Implementing Partners

- Implementing partners that continue to operate in Uganda should continue to support districts and health facilities to implement PHFS practises and should support the rollout of PHFS practises in additional districts.
- Future initiatives should include baseline and end-line evaluations.

For Districts

- District health and human resource offices should work in coordination to ensure that transfers of trained staff do not disrupt ongoing performance improvement programmes at the health facilities. For instance, when trained staff are transferred, they should be replaced with staff with similar knowledge and skills.
- The districts should incorporate the best practises/lessons learned from the PHFS into the district work plans.

For Health Facilities

- Health facilities should continue to implement the best practises of PHFS.
- Health facilities should continue to collect, monitor, report, and use the data on the PHFS indicators.

1. Introduction

1.1 Background to the PHFS Initiative

In 2010, the World Health Organization (WHO) revised its guidelines on the elimination of mother-to-child-transmission of HIV (eMTCT) to include key recommendations on using antiretroviral (ARV) medicines for the treatment of pregnant women and prevention of HIV in infants. These guidelines were based on new evidence (from 2009) demonstrating that postnatal mother-to-child transmission (MTCT) rates could be reduced dramatically if three key practises were adopted: 1) HIV-infected mothers exclusively breastfed for the first 6 months, 2) they continued breastfeeding—while introducing complementary foods—until at least 12 months, and 3) mother-baby pairs had access to ARVs during this period. Adherence to these guidelines would reduce MTCT during the postnatal period from 15 percent to 1 percent or less³. Although several countries adopted the new guidelines, implementation and scale-up remained slow in some countries due to insufficient skills, resources, support, and stocks of drugs and other supplies at health facilities. In most resource-limited settings, mothers were not receiving adequate information, skills, and support to guarantee HIV-free survival for their infants in their first 2 years of life. In particular, retention in care was poor, with a large number of mothers and their infants being lost to follow-up during the early postnatal period⁴.

To accelerate country adoption and implementation of WHO’s 2010 guidelines, and thereby increase the HIV-free survival of infants born to HIV-positive mothers, WHO and the United States President’s Emergency Plan for AIDS Relief (PEPFAR) initiated the Partnership for HIV-Free Survival (PHFS), initially targeting six countries with a high HIV burden—Kenya, Lesotho, Mozambique, South Africa, Tanzania, and Uganda—for 2 years. The initiative also was a response to the *Global Plan Towards the Elimination of New HIV Infections among Children by 2015 and Keeping Their Mothers Alive*, released by the Joint United Nations Programme on HIV/AIDS (UNAIDS) in 2011, which called for, among other things, reducing the number of new HIV infections among children by 90 percent⁵. PHFS was introduced at a time when the approach to eMTCT had evolved into Option B (Option B+ offers lifelong ART to HIV-positive pregnant women, lowers lifetime transmission rate, leads to less risk of resistance, enables safer breastfeeding, and provides continuity of treatment throughout childbearing years), while all HIV-exposed infants are given daily nevirapine from birth through 4–6 weeks of age regardless of infant feeding method. Option B+ also calls for promoting exclusive breastfeeding of all infants born to HIV-positive mothers over other feeding methods.

1.2 Objectives of the PHFS Initiative

The goal of the PHFS globally was to increase HIV-free survival of infants born to HIV-infected mothers. The initiative’s global objectives were to:

- Achieve HIV-free survival among infants through country-specific eMTCT practises, such as the effective implementation of Option B+
- Reduce neonatal deaths due to malnutrition, diarrhoea, and pneumonia through the optimal support of infant feeding practises through the first 12—24 months of life
- Use quality improvement (QI) methods to accelerate the implementation of the WHO 2010 PMTCT guidelines

³ R.L. Shapiro et al. “Antiretroviral Regimens in Pregnancy and Breast-Feeding in Botswana.” *New England Journal of Medicine*. 362: June 2010. <http://www.nejm.org/doi/full/10.1056/NEJMoa0907736#t=articleDiscussion>.

⁴ Greenblott, K. 2013. *The Partnership for HIV Free Survival (PHFS). Report of the Launch Meeting, Pretoria, South Africa*. 11—14 March 2013.

⁵ UNAIDS. 2011. *Global Plan toward the Elimination of New HIV Infections among Children by 2015 and Keeping their Mothers Alive 2011-2015*. Joint United Nations Programme on HIV/AIDS: Geneva.

The Ugandan goal was to reduce MTCT from 15 percent to less than 1 percent of HIV-exposed children under 2 years and increase adherence to recommended infant and young child feeding (IYCF) practises to 80 percent by 2015.

It also aimed at utilising nutrition assessment, counselling, and support (NACS) to improve maternal and infant nutrition during the window of opportunity and to encourage exclusive breastfeeding for all mothers, including HIV+ mothers treated through Option B+.

The PHFS was intended to accelerate the progress of existing national programming using QI methodologies and a multi-country learning platform established to share innovations, best practises, and lessons learned.

1.3 Purpose of this Report

The main purpose of this report was to document the experiences and lessons learned from implementing the pilot and spread phases of the PHFS initiative in Uganda from 2012–2014 to inform scale up. The findings in this report are expected to inform future policies and programmes for integrating nutrition and eMTCT, as well as use of QI approaches. The documentation focuses on the design of the PHFS initiative, roles and responsibilities of actors, extent and modalities of implementation, partnerships and coordination, factors enabling or constraining success, and lessons learned.

1.4 Methodology for this Report

Data were collected through qualitative methods, including a desk review of existing documentation (the baseline, Data Quality Assessment [DQA], support supervision, and progress reports), field visits to the participating districts and health facilities, and interviews with key informants. The key informants included eight staff from partner agencies, 21 district staff, and nine health workers. The documents reviewed consisted of the PHFS preparation and implementation manual, global launch documents, the Uganda baseline report, progress reports from partners, supportive supervision reports, and the DQA report. Field visits were conducted in the six districts, and a sample of health facilities were visited. District Health Teams (DHTs) and health workers in the sample facilities were interviewed. Key informant interviews were conducted with staff from the PHFS implementing partner agencies. Annexes 1 and 2 include more details on the methodology, sites visited, and the persons who participated in the consultations.

1.5 Organization of this Report

This report describes the PHFS activities undertaken during the various phases in Uganda. Section 1 provides the background to the PHFS Initiative, its objectives, and the methodology for generating the report. Section 2 describes the PHFS design, management, and implementation, and includes an assessment of whether these were done according to plan and met stakeholders' expectations. Section 3 discusses the initiative's achievements and factors that either enabled or limited its success. The final section synthesizes the key best practises and lessons learned and makes recommendations for future similar initiatives or plans to scale up the PHFS.

2. PHFS Design, Management, and Implementation

2.1 The PHFS Initiative at the Global Level

At the global level, key PHFS partners included the U.S. Agency for International Development (USAID), the U.S. Centers for Disease Control and Prevention (CDC), WHO, and PEPFAR. A global steering committee composed of the USAID Office of HIV/AIDS; WHO Department for Maternal, Newborn, Child, and Adolescent Health; and the Institute for Healthcare Improvement (IHI) was established to coordinate the overall PHFS design and cross-country learning platforms. The steering committee developed the PHFS design and implementation strategies. The committee also facilitated the development of a manual on preparing for and implementing the PHFS that implementing countries were to adapt to their contexts. After several months of preparatory work, the PHFS was launched in Pretoria, South Africa, on 11–14 March 2013, with representatives from the six member countries in attendance.

After the launch, global-level implementation of the PHFS focused on coordination and information sharing through cross-country platforms and webinars with the partners in the six PHFS countries.

At the country level, PHFS countries developed context-specific work plans that detailed key activities, implementation timelines, and partner responsibilities and defined implementation modalities within countries. Ministries of health led the process and ensured the involvement of other in-country partners.

2.2 The PHFS Initiative in Uganda

In Uganda, the initiative sought to support scalable district-wide services aimed at preventing postnatal transmission of HIV and promoting good IYCF practises, including exclusive breastfeeding for the first 6 months through the NACS platform (see section 2.6.1 on NACS for more details). The main target beneficiaries were HIV-positive women in the postpartum period, HIV-exposed infants, and health service providers. The initiative was launched in Uganda in August 2013, by which time Option B+ was already being rolled out.

2.3 Structures, Actors, and Roles in the PHFS in Uganda

PHFS implementation in Uganda involved several partners: the Ministry of Health (MOH) and six U.S. Government (USG) implementing partners: Food and Nutrition Technical Assistance III Project (FANTA), managed by FHI 360; USAID Applying Science to Strengthen and Improve Systems Project (ASSIST), managed by University Research Co.; Strengthening Partnerships, Results, and Innovations in Nutrition Globally Project (SPRING), managed by John Snow Inc.; The AIDS Support Organization (TASO), a CDC-funded partner; Strengthening TB and HIV/AIDS Response in East Central Uganda (STAR-EC), managed by John Snow Inc.; and Strengthening TB and HIV/AIDS Responses in the Southwest Region of Uganda (STAR-SW), managed by the Elizabeth Glaser Pediatric AIDS Foundation (EGPAF). Each partner's roles and responsibilities are shown in Table 1.

Table 1. PHFS Structures and Partners and Their Roles

Structure and Partner	Roles and Responsibilities
Global level	
USAID, PEPFAR, CDC, WHO, IHI, UNICEF	<ul style="list-style-type: none"> • Funding, implementation oversight, coordination of overall PHFS design and implementation, managing cross-country learning platforms
MEASURE Evaluation	<ul style="list-style-type: none"> • Provision of a range of evaluation activities in the PHFS implementing countries (not involved after the beginning phase)
National level	
Ministry of Health	<ul style="list-style-type: none"> • Leadership and coordination of PHFS in Uganda, including at the district level with support from district leadership • National-level oversight, coordination of in-country partners and activities, policy guidance, M&E
USAID ASSIST	<ul style="list-style-type: none"> • Provided technical support in QI at national level and in PHFS districts through training, learning sessions, and documentation, coaching visits • Responsible for capacity strengthening of implementing partners (TASO and SPRING) and districts in QI and supporting health facilities
FANTA	<ul style="list-style-type: none"> • Provided technical support for national level activities (with ASSIST and MOH) and supported MOH's coordination of the PHFS initiative. • Provided technical assistance in M&E (baseline surveys, DQAs, supportive supervisions, capacity strengthening related to the health management information system) • Supported NACS implementation (capacity strengthening for trainers, Nutrition Service Delivery Assessment [NSDA]) at national level • Provided technical support in compilation of the PHFS implementation report
Implementation level	
SPRING, TASO, STAR-SW, STAR-EC	<ul style="list-style-type: none"> • TASO: Supported implementation of PHFS at health facilities in Jinja, Manafwa, and Tororo • SPRING: Helped ensure integration of NACS into eMTCT with support from STAR-SW and STAR-EC in Kisoro, Namutumba, and Ntungamo
District Health Teams and District Nutrition Coordination Committees	<ul style="list-style-type: none"> • Implementation of the PHFS initiative • Supervision and coordination at district level • Identification of best practises for PHFS

The partners' respective roles and the extent to which they played these roles are elaborated on below. Stakeholders' views about these roles and the initiative's design are also discussed.

MOH: The MOH was mandated to coordinate implementation of the PHFS with support from FANTA. The MOH provided overall leadership, technical support, and coordination. This included organizing the PHFS launch in Uganda and establishing a PHFS coordination committee, chaired by the Director General of Health Services, and a PHFS technical working group. The MOH also spearheaded the development of a work plan that addressed context-specific issues, coordination of monthly and quarterly follow-up meetings for the PHFS technical working group, support for the initiative's M&E task force, and coordination meetings with the implementing partners. In addition, the MOH coordinated the baseline assessment, DQAs, supportive supervision, and learning and experience-sharing meetings. The MOH also ensured that PHFS indicators were mainstreamed in the health management information system (HMIS).

FANTA: FANTA joined the partnership because of its experience in providing technical assistance to nutrition programmes in Uganda and other countries. FANTA provided support to the MOH for the coordination and implementation of national-level activities, which included technical working group coordination meetings, implementers’ learning sessions, supportive supervision visits at the health facilities, PHFS assessments (the baseline survey, DQAs, and the two joint supervision assessments), M&E task force meetings, and production of the PHFS implementation report, which involved field consultation with key stakeholders in the 6 districts.

ASSIST: ASSIST was mandated to orient the partners in QI methods, coordinate the QI methods to improve antenatal care (ANC) and postnatal care (PNC) care in health facilities in the six districts, set up QI teams within the health facilities and link these to the other PHFS implementing partners, and facilitate and participate in joint coaching meetings at the facilities to ensure data were being collected and used. ASSIST also planned, organised, facilitated, and participated in learning session meetings and development of ‘change packages’—sets of recommended changes in the service delivery process and in data management—for improving retention of mother-baby pairs, improving data quality, and improving services provided to mother-baby pairs at routine visits (see section 2.6.1). The project facilitated learning sessions and inter-country exchanges among the partners to discuss progress and close performance gaps. It coordinated global learning sessions through webinars with the global partnership and tracked QI indicators across PHFS sites. ASSIST also tracked indicators in the District Health Information Systems 2 (DHIS2) monthly to ascertain improvement in data collected across the sites.

TASO: TASO is a pioneer HIV/AIDS care and support organization in Uganda with extensive experience in both facility- and community-based HIV response. It supported PHFS implementation in Jinja, Manafwa, and Tororo districts, working closely with the district leadership, ASSIST, and other PHFS implementing partners to help integrate NACS into eMTCT along the continuum of care using the QI approach. To achieve this, TASO provided health facilities with equipment for conducting nutrition assessments in the ART and outpatient department (OPD) clinics. TASO also participated in routine monitoring of the mother-baby pairs to ensure retention and reduction in HIV re-infections. TASO teams also helped develop and implement the standard care package used by the health workers (see Box 1). TASO was responsible for providing data collection tools and ensuring that data for the indicators were collected. In the three districts, TASO teams participated in monthly data collection on the PHFS indicators in collaboration with ASSIST and supported quarterly supervision, mentorship, and coaching of the health facility QI committees in collaboration with ASSIST and the district health leadership. TASO also supported the district leadership in the scale-up process and with training health workers in the new sites. TASO teams worked closely with the three District Health Officers (DHOs) as the main entry points and advocates for the initiative. Along with other implementing partners, TASO also facilitated quarterly learning sessions in Kampala. In addition,

Box 1. The Standard Care Package

Each mother and her baby should receive the following set of services at each routine monthly visit:

- Mother receives ART refills.
- Baby receives nevirapine if under 6 weeks of age or cotrimoxazole if 6 weeks or older.
- Both mother and baby receive nutrition assessment using either mid-upper arm circumference, body mass index-for-age, or weight-for-age for babies under 6 months.
- Mother receives IYCF counselling, an appointment for the next visit, and details of what will happen during that visit.

TASO helped lead the training of community-based actors, including village health team (VHT⁶) members, mentor mothers, and community linkage facilitators (CLFs).

SPRING: SPRING had been implementing nutrition programmes in Uganda for more than a year when the PHFS initiative began. SPRING was responsible for PHFS implementation in the districts of Namutumba, Kisoro, and Ntungamo. SPRING supported the districts to incorporate nutrition into eMTCT, focusing on integrating NACS into eMTCT. SPRING provided ready-to-use therapeutic food (RUTF), food demonstration items, and anthropometric equipment (mid-upper arm circumference [MUAC] tapes and weighing scales) to the health facilities it supported (see Annex 3). SPRING participated in quarterly mentorship and supportive supervision of the health workers in the three districts in collaboration with STAR-EC, STAR-SW, and TASO to ensure that nutrition data were being properly and adequately captured in the health facilities. SPRING had two nutrition specialists in Namutumba district but worked through the STAR-SW staff in the western districts of Kisoro and Ntungamo. Through these staff, SPRING supported the training of health workers and CLFs in the NACS approach. SPRING provided orientation to the District Nutrition Coordination Committee (DNCCs) and Sub-County Nutrition Coordination Committees (SNCCs) in Namutumba district on their roles and responsibilities as stipulated in the Uganda Nutrition Action Plan. In collaboration with STAR-SW, SPRING supported and facilitated learning sessions for health workers in southwest Uganda. SPRING also trained VHTs in basic nutrition and deployed them in communities to link mothers to health facilities.

STAR-SW: SPRING, in collaboration with STAR-SW, implemented eMTCT activities in southwest Uganda in the Kisoro and Ntungamo districts. STAR-SW conducted all activities related to Option B+ and supported NACS integration into eMTCT. It supported implementation of HIV care and of Option B+ for eMTCT at the PHFS sites by ensuring that mother-baby pairing was being done at the health facilities and that records were well kept. STAR-SW facilitated joint QI coaching for the health facility staff in collaboration with ASSIST to ensure the PHFS and nutrition-specific indicators were being collected alongside the HMIS indicators. STAR-SW also printed and distributed reference materials and data collection tools.

STAR-EC: Funded by USAID, STAR-EC was contracted by SPRING to implement eMTCT/Option B+ activities in Namutumba district in eastern Uganda. STAR-EC worked closely with SPRING to ensure that NACS and QI were addressed in the PHFS sites. This was done through mapping all women of reproductive age and all pregnant and lactating women and referring them to goal-oriented ANC and PNC visits; ascertaining their HIV status and providing care as needed; mapping VHTs, civil society organizations, and community opinion leaders and training them on aspects of eMTCT along the continuum of care; training maternal and child health care providers at facilities on eMTCT guidelines and on providing effective routine counselling; and linking mothers and babies in care to CLFs. STAR-EC also collaborated with ASSIST to triangulate weekly eMTCT data for client monitoring, coordinated with SPRING to mentor health facility staff, and identified malnourished clients who needed RUTF.

District, health facility, and community partners: Key district-level actors included the DHTs and the DNCCs. These district partners worked closely with actors below the district level including health facility workers and community-based actors. Community-level partners such as VHTs, CLFs, and in some cases, expert clients and mentor mothers, were responsible for following up with mothers, encouraging adherence to treatment, reminding mothers of their next appointments, and providing counselling and referral. Strong linkages with community structures and actors were a vital part of the PHFS initiative's design. Stakeholders who participated in this documentation highlighted the importance of linkages to community structures and actors to the initiative's success, especially in promoting adherence and retention.

⁶ A VHT is a structure, recognized by Government of Uganda, that consists of about five volunteers selected by community members to serve as the first point of contact for primary health care in a village. The team mobilises communities for primary health care and links them to formal health facilities.

2.4 Coordination Mechanisms

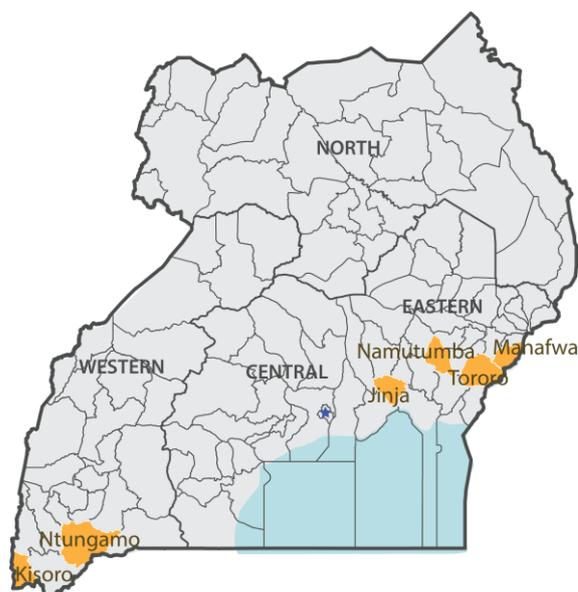
PHFS activities were coordinated at global, national, and district levels (see illustration in Annex 10). At the global level, cross-country webinars were held with global level partners. National-level coordination was through meetings of the National Coordination Committee, which was led by the Director General of Health Services in the MOH and comprised representatives from different departments, including the AIDS Control Programme and the Nutrition Unit. The MOH worked hand in hand with FANTA to provide technical oversight to the partners. Further coordination was through meetings of the M&E task force, headed by the MOH's M&E specialist, and through monthly teleconferences between IHI and FANTA for in-country sharing of progress on implementation. There were also quarterly coordination meetings and monthly implementing partner meetings to review progress against work plans. At district level, intra-district coordination was through the DNCCs and SNCCs, though the extent of this varied across districts.

2.5 Implementation Sites

2.5.1 Selection of Districts and Prototype Health Facilities

The PHFS initiative was piloted in learning sites in 24 prototype health facilities in six districts—Jinja, Kisoro, Manafwa, Namutumba, Ntungamo, and Tororo—selected by the MOH because they had a high volume of HIV/AIDS cases and high levels of malnutrition and were rolling out Option B+ (Figure 1). Selection of the spread facilities was based on criteria established by the respective implementing partners.

Figure 1. Six PHFS Uganda Districts



2.5.2 The Scale-Up Process

After the pilot ended in the initiative's second year of implementation, the PHFS was rolled out in all 108 health facilities offering Option B+ services in the six districts. The scale-up plan and process were in line with the MOH's strategic goal of strengthening the health system's eMTCT capacity through targeted NACS interventions during the antenatal and postnatal periods. Table 2 shows the number and grade⁷ of health facilities that took part in the pilot and the scale-up.

⁷ In Uganda, health facilities are graded hierarchically from top to bottom as National Referral Hospitals, Regional Referral Hospitals, District Hospitals, Health Centre IVs (county level), Health Centre IIIs (sub-county level), Health Centre IIIs (parish level), and the VHT, which is a non-facility structure equivalent to what would be Health Centre I.

Table 2. Pilot and Scale-Up Health Facilities per District

District	Pilot sites				Scale-up sites				
	HCIII	HCIV	Hospitals	Total	HCII	HCIII	HCIV	Hospitals	Total
Tororo	0	3	1	4	0	17	3	2	22
Namutumba	3	1	0	4	0	3	0	0	3
Manafwa	1	3	0	4	0	10	1	0	11
Kisoro	1	2	1	4	0	15	0	1	16
Ntungamo	3	1	0	4	1	11	1	0	13
Jinja	1	3	0	4	0	15	1	3	19
Total	9	13	2	24⁸	1	71	6	6	84

Stakeholders highly commended the phased approach in scaling up PHFS implementation. They noted that it enabled staff of the health facilities that had already started implementation to share their experience with staff of health facilities that had not yet started. Lessons from the pilot phase informed the scale-up process.

2.6 Implementation of PHFS in Uganda

This section discusses the implementation of PHFS in Uganda, focusing on the initiative's thematic components, implementation strategies used, and actual implementation at different levels.

2.6.1 PHFS Thematic Components

The PHFS initiative intervened in three main thematic areas: eMTCT, NACS, and QI. These components were not addressed separately but rather integrated, with NACS being incorporated into eMTCT using QI approaches. The components are elaborated below.

Elimination of Mother-to-Child Transmission of HIV

In 2012, the MOH released the Integrated National Guidelines on Antiretroviral Therapy, Prevention of Mother-to-Child Transmission of HIV, and Infant & Young Child Feeding to provide guidance to health workers in the delivery of integrated HIV prevention, care, and treatment and in nutrition care, support, and treatment for people living with HIV. Uganda also adopted Option B+ as an improved approach to eMTCT in September 2012. The rollout of this policy involved several activities including regional sensitisation and coordination meetings with health officers, eMTCT focal persons, and implementing partners; district entry meetings aimed at introducing the initiative to the districts; training for health workers in Option B+; mentorship visits; provision of data collection tools; provision of medical equipment, especially for integration of care into early infant diagnosis (EID) of HIV; and follow-up of lost mother-baby pairs.⁹

The PHFS baseline study showed that most of the health facilities assessed provided eMTCT services, but nutrition services (e.g., nutrition assessment, counselling on nutrition, and provision of nutrition support) were minimal and/or suboptimal. While all the health facilities had eMTCT services with EID services, the entry points for EID services varied. Twelve facilities had EID care points within the antenatal departments, postnatal departments, and child clinics; eight facilities had EID care points within the ART clinic; and four had EID care points in the laboratory or OPD. Placing EID outside the

⁸ 24 sites were piloted with support from the MOH; of these, 22 were ASSIST sites.

⁹ Esiru, G. January 22, 2013. "PMTCT Implementation in Uganda: Option B+ Experience." International Prevention Meeting, Protea Hotel, Entebbe, Uganda.

maternal and child health (MCH) unit was a missed opportunity for improving access to services, including child survival services and postnatal care for the mother. The PHFS initiative provided a good opportunity to close these gaps and ensure optimal services that would enhance child survival.

NACS Implementation

Through the years, the MOH and development partners have been using NACS to provide targeted nutrition support at various health facilities and continue to scale up nutrition services, while improving the quality of services in the facilities where NACS was launched. The NACS framework includes strengthening service providers' skills in nutrition assessment, categorisation, treatment of acute malnutrition (provision of RUTF), prevention services such as counselling on IYCF, and facilitating linkages with other support programmes. The PHFS used the NACS framework to integrate nutrition into eMTCT service delivery at the facility and community level, and used QI methods to implement the 2010 WHO guidelines. NACS implementation in the PHFS initiative involved seven steps:

1. *Assessment:* All health facility clients are assessed for their nutritional status at each visit (including follow-up visits).
2. *Categorisation:* The nutritional status of all clients assessed is recorded in the relevant patient register.
3. *Counselling:* All clients found to be malnourished (both undernourished and overnourished) after assessment and categorisation receive nutritional counselling.
4. *Food by prescription:* All moderately and severely acutely malnourished patients who pass the appetite test receive RUTAFa or another RUTF.
5. *Follow-up:* All patients receiving RUTAFa or another RUTF receive adequate follow-up care.
6. *Community links:* Links are established between the community and facility including follow-up and referral of clients and community-based nutrition support, all performed by community-based volunteers.
7. *Education:* All patients and clients receive education on good nutrition and hygiene.

Quality Improvement

QI is a management approach to improve and maintain quality that emphasizes internally driven and relatively continuous assessments of potential causes of quality defects, followed by action aimed either at maintaining quality or correcting problems at an early stage (MOH 2011). QI focuses on improving performance by improving systems and processes.

ASSIST focused on 22 high-volume sites out of the initial 24 pilot sites. It strengthened implementation of the QI approach in these sites so that they could contribute lessons learned that would inform scale-up of the QI approach within the initial PHFS districts, other districts, and at the national level.

Using the QI approach: The PHFS combined three technical areas: PMTCT and EID, NACS, and HIV care and treatment. The QI approach was applied to integrate the three technical areas by focusing on creating a system to address the health needs of mother-baby pairs instead of providing different types of care (PMTCT/EID, NACS, HIV care and treatment) vertically. The site-level improvement work was carried out in the following phases:

- ***Introduction/orientation to the PHFS work:*** Health facility and district teams were introduced and oriented to the PHFS initiative during initial coaching visits. These visits also involved a baseline assessment to rapidly measure key performance indicators and identify gaps in service delivery, as well as sharing basic QI concepts identifying areas for prioritisation. At district level, the implementing partners and the MOH introduced the PHFS through a series of meetings with the DHTs.

- **Formation and reconstitution of QI teams:** A tenet of QI is the presence of a multi-disciplinary team working together to address gaps in the process of care. QI teams were either newly formed at sites where no teams existed or reconstituted at sites where the teams were not functional or were not working on PMTCT, NACS, and HIV.
- **Prioritisation of QI work:** The baseline assessment found that key data tools (registers, mothers' ART care cards, exposed infants' cards) were incompletely and inaccurately filled out. Less than 2 percent of the EID clinical charts were complete and accurate, and there was no system to link mothers and their babies in care. Improving data completeness and accuracy was prioritised because without correct data, teams could not determine performance and identify gaps in their processes of care. The teams needed to link exposed babies to their mothers so that health workers could know whether these babies' mothers had started ART for Option B+, so they decided to pair the mothers and their babies' clinical charts. (A change package detailing what changes the QI teams put in place to improve completeness and accuracy of data was developed and published)¹⁰.

A key challenge of the PHFS work and for QI teams was deciding what areas to work on, thus the key elements of the PMTCT and NACS care pathway, which have a direct impact on eMTCT and HIV-free infant survival, were identified. The areas were classified as retention of mother-baby pairs, care provided at routine visits, and care/services provided at special visits. By simplifying and sequencing the improvement work, the teams were able to address specific problems without spreading their efforts too thin. Change packages documenting what QI teams did to improve retention of mother-baby pairs¹¹ and the provision of a standard package of care¹² were published. (Also see Box 2 and Annex 4 for information on the change packages related to the standard package of care.)

Box 2. Change Package to Improve the Provision of the Standard Care Package at Routine Visits

- Drugs dispensed in the same area where mother-baby pairs are seen
- EID and ART clinics (services for the exposed baby and HIV-positive mother) merged
- Counter book/form to keep a record of who received all the services
- Mother's and baby's cards completely filled out before the pair leaves the clinic
- On-the-job training of health workers and expert clients to provide services such as nutrition assessment using MUAC and IYCF guidelines
- Reminder notes placed on the wall to remind clinicians and midwives about the services and updating the cards
- Mothers informed about what services to expect so they can remind health workers in case a service is not provided
- Assignment of roles within the clinic so that all services could be provided

Source:

<https://www.usaidassist.org/resources/improving-quality-services-provided-hiv-positive-mothers-and-their-babies-routine-visits>.

- **Supporting QI teams:** The QI teams were supported through monthly visits by QI coaches. During these coaching visits, data were collected to monitor the progress of improvement and to identify

¹⁰ The change package on completeness and accuracy of data is available at <https://www.usaidassist.org/resources/improving-completeness-and-accuracy-data-elimination-mother-child-transmission-hiv-tested>.

¹¹ The mother-baby pairs change package is available at <https://www.usaidassist.org/resources/improving-retention-mother-baby-pairs-tested-changes-and-guidance-uganda>.

¹² The change package on providing a standard package of care is available at <https://www.usaidassist.org/resources/improving-quality-services-provided-hiv-positive-mothers-and-their-babies-routine-visits>.

remaining gaps. The coaches further strengthened the skills and competence of the QI teams in areas including identifying an improvement aim, analysing the root cause of the problem, developing indicators and identifying the gaps through measurement, developing and testing changes that might lead to improvement, and using documentation journals.

- **Peer-to peer learning to accelerate improvement:** To further facilitate the sharing and spreading of change ideas, quarterly peer-to-peer learning sessions were held so that teams could come together and share their work. In the scale-up phase, learning and experience meetings were held to help expansion sites quickly adopt the changes implemented in the demonstration sites.
- **Monitoring improvement using dashboards:** At the facility level, improvement was monitored using the dashboard, a visual tool to present data over time and enable facilities to prioritise what improvement projects to work on. The dashboards were also used to identify health facilities that were doing well and could serve as benchmarks and to identify technical areas that were generally weak so that system-level interventions could be explored.

2.6.2 Implementation Strategies

The initiative used five key strategies in the target districts:

1. *Capacity strengthening for service providers for eMTCT, NACS, and QI.* This was done to ensure that the district and QI teams were oriented on NACS and eMTCT interventions. Trainers and service providers were given information on the NACS and eMTCT approaches. District QI coaches were identified, and quarterly mentorship and learning sessions were conducted.
2. *Creating demand for NACS within MCH service points.* This aimed at mobilisation of communities for increased use of NACS services, district- and community-level sensitisation to reduce stigma against HIV-positive clients, and establishment of community-facility linkages. Demand was created through innovations such as mother-baby pairing, follow-up of clients by CLFs, and counselling.
3. *Strengthening the health service delivery system to integrate NACS into eMTCT interventions.* This focused on ensuring continuous availability of essential supplies such as RUTF and anthropometric equipment and on scaling up community- and facility-level implementation of the NACS service package.
4. *Using QI science to integrate NACS and eMTCT service delivery for eligible mothers and babies.* HIV-positive mothers and their exposed babies were receiving NACS, eMTCT, and other services from separate clinicians at separate service points, sometimes on separate days. Staff were supported to make major changes in their service delivery models, with the aim of treating the mother and the baby as a pair and ensuring that they receive all health services from the same clinician on the same day at the same service point.
5. *Strengthening M&E for NACS within eMTCT/MCHN settings.* This included conducting a baseline survey to inform the PHFS implementation; ensuring proper documentation and regular reporting, assessments, and learning sessions; and updating the HIV/AIDS database so that the latest data could be integrated into the national HMIS.

2.6.3 PHFS Implementation at the National, District, Facility, and Community Levels

Implementation of PHFS in Uganda at the national, district, facility, and community levels involved a series of activities and engagements, elaborated on below.

National-Level Implementation

National-level activities included the following:

National launch: The PHFS was launched nationally on August 9, 2013, in Namutumba district. The launch was jointly celebrated with World Breastfeeding Week under the theme: *'Strengthening Community Support for Optimal Breastfeeding towards a Healthy, Well-Nourished and HIV-Free Generation'*.

Hosting of regional meetings: Uganda hosted regional meetings of partners from Uganda, Kenya, Tanzania, the United States, and Europe. The meetings included a range of presentations and group discussions. During these meetings, participants discussed their progress and challenges in developing and implementing change packages to improve the quality of health services and increase the rate of HIV-free survival. Country teams also used these meetings to develop country plans for the subsequent periods of work and to discuss future scale-up of their activities.

National-level meetings: Three types of national-level meetings were conducted: steering committee meetings (chaired by the Director General of Health Services), quarterly coordination meetings convened by the MOH and chaired by the Programme Manager of the AIDS Control Programme in the MOH, and M&E task force meetings that consisted of M&E personnel from the implementing partners and the MOH.

Webinars with partners from other countries: Webinars were held quarterly with participants from other countries to discuss implementation progress, good practises, lessons learned, and challenges encountered during implementation and how they were or could be mitigated.

District-Level Implementation

Within districts, implementation of PHFS entailed a pilot in 24 facilities and subsequently, a scale-up to 108 facilities. Scale-up was facilitated by factors such as the achievements and lessons learned from the pilot phase, support from the six districts' coaches, district leadership, and support from the implementing partners. However, scale-up started late and several facilities did not fully benefit from the quarterly coaching and mentorship because the initiative was ending.

Involvement and performance varied among districts. In some districts, stakeholders were slow to grasp the initiative's rationale and implementation, while in others, some actors expected to receive funding as part of the initiative. The national-level actors had to take more time with such districts to bring them to a common understanding of how the initiative worked. The district response also largely depended on the leadership, specifically the attitude and response of the DHOs, who were critical to district involvement in the initiative. The pace of districts' buy-in was reflected in their performance, with early adopters often performing better. Some districts also performed better on some tasks than others.

Specific district-level activities, conducted in collaboration with district-level implementing partners, included the following:

District entry meetings: The National Coordination Committee and the implementing partners held district entry meetings in the six PHFS districts to introduce the initiative to the districts and health facilities. Participants in the district entry meetings included the DHT, the district leadership, and the implementing partners.

Coaching and mentorship: The implementing partners worked with district mentorship teams to provide continuous coaching and mentorship to health facilities aimed at enhancing their performance of agreed-on PHFS-related tasks. In the first year of implementation, SPRING, TASO, and ASSIST, together with district coaches, conducted monthly joint coaching visits in the PHFS sites. Six mentorship and coaching teams, one in each district, were responsible for visiting the health facilities to continue to strengthen capacity on the spot. Each team consisted of two national trainers from the MOH, implementing partner representatives, one DHT member/PHFS focal person, and one health

facility staff. The mentorship teams were useful as not all health workers could adequately grasp the elements of QI during trainings. Support and coaching sought to help lagging facilities catch up.

District supportive supervision visits to health facilities: These visits were designed to monitor progress of implementation and provide on-site support to the health facilities. Two support supervisions and one DQA were conducted by the national team for the districts. The supportive supervision teams consisted of district teams and implementing partners. During these visits, the supervision teams met with QI teams and other health workers to get updates on PHFS implementation at facility level and conducted the supervisory exercise on the various service delivery points.

Learning and experience sharing: These included quarterly review meetings between the PHFS and district partners, learning and sharing meetings, and harvest sessions. Altogether, there were five learning and experience sharing sessions conducted and the scale-up process was highly informed and facilitated by these learning platforms.

Facility-Level Implementation

Facility-level interventions included capacity strengthening; activation of QI teams; provision of NACS; mother-baby pairing; support to patients at critical points in ANC clinics, labour and delivery suites, postnatal and ART clinics, young child clinics, and laboratory services; integrating NACS using QI; and linking with communities. Each of these is elaborated on below.

Capacity strengthening activities: These included in-service training of health workers, community-based implementers (VHTs/CLFs), and other health service providers. These cadres were trained in the NACS approach, the Uganda eMTCT guidelines (Option B+), and QI. They were also provided with information, education, and communication/social and behaviour change communication materials for guidance and reference. The materials used were developed with support from development partners and added value not only for PHFS implementation but also for the day-to-day activities in the facilities and communities. In collaboration with the MOH, the implementing partners supplied the facilities with anthropometric equipment such as weighing scales, MUAC tapes, and height boards to support nutrition assessment services for clients and their babies. Mentorship of health facility staff, establishment of QI teams, national-level coordination, and M&E of both nutrition and HIV-free survival outcomes were key in ensuring integration was taking place.

Re-activation and establishment of QI teams: QI through M&E of health facility data was central to PHFS implementation. QI teams were either newly formed or re-constituted in the facilities (comprising the facility in-charge, a representative from each department in the clinic, a community representative, and a records assistant) to oversee the reporting and tracking of PHFS indicators, cross-check them against the DHIS2 to ascertain improvement, and overall address the gaps in the process of care.

Provision of NACS services: Services provided under the NACS approach included promotion, protection, and support of breastfeeding practises; nutrition assessment for clients in the facility's different departments; provision of or linkages to ARVs/ART; PNC; IYCF counselling and education; provision of nutrition support, especially for patients with severe or moderate acute malnutrition; growth monitoring; tracking and follow-up of mother-baby pairs; maternal nutrition education and counselling; and micronutrient supplementation.

Food demonstrations and preparation: In some health facilities, such as those where TASO and SPRING were implementing, food preparation demonstrations were held at facilities and in some central venues in the communities. The demonstrations were intended to empower the clients and community members with the skills to prepare nutritious foods suitable for different categories of people such as children, the very sick, and those with particular conditions, such as lack of appetite and diarrhoea. Food preparation demonstrations also equipped health workers to provide nutrition education and conduct subsequent demonstrations.



Food preparation demonstration (photo by SPRING)



Food demonstrations in districts (photo by TASO)

Mother-baby pairing and other efforts to improve retention: The baseline survey, conducted in April 2013, had identified a gap in retention of mothers and their babies. Mothers and babies were being seen separately by different people, and their care was not linked. In addition, a large percentage of exposed infants who had been enrolled in EID care were lost from care and had not been seen at the facility for more than 2 months (MOH 2014).

Efforts to improve retention started with ensuring that mother-baby pairs who missed appointments of either the mother or the baby but were still accessing other services at the facility were supported to attend mother-baby pair appointments. Health facility staff established mother-baby care points that ensured mothers and babies got the same appointments to facilitate follow-up. Subsequently, changes to bring back mother-baby pairs that had stopped attending the facility for any service were tested. (Box 3 and Annex 5 outline the change package to improve retention). To better understand why mothers and their babies were not retained in care monthly, site improvement teams asked HIV-positive mothers who had missed at least one appointment why they were absent and what could be done to support them in care. The results showed that 80 percent of the problems with retention were caused by forgotten appointments, other activities on the day of appointment, lack of transport to the facility, and lack of privacy during counselling. The mothers also suggested how retention could be improved, including continuous counselling to address issues that arise later, use of reminders, reducing waiting

Box 3. Change Package to Improve Retention of Mother-Baby Pairs

- Mother and baby seen together in the clinic on the same day
- Priority given to mother-baby pairs
- Write appointment date on medicine bottle
- Give mother and baby enough drugs to last until the next appointment
- Pair mothers' and babies' cards and have clinicians/dispensers remind them of appointments
- New clients seen where they are tested
- Provide a special clinic day for mothers and children
- Expert patients follow up with lost mothers and mothers who miss their appointments
- Ask mothers to come with their babies before services are provided
- Enlist mentor mothers to trace and counsel mother-baby pairs and return them to care
- Use phone calls to remind mothers of their appointments
- Have service providers meet regularly
- Male involvement in family support groups

Source: www.usaidassist.org/resources/improving-retention-mother-baby-pairs-tested-changes-and-guidance-uganda.

time at the facility, and increasing the involvement of their spouses/partners. This information was used to inform the types of changes and interventions that the health workers tested and implemented to improve retention of mother-baby pairs at their facilities. For example, health workers worked with community representatives, like peer mothers and CLFs, to trace mothers and their babies who were lost to follow-up. These community representatives tested various changes to find lost mothers and babies and return them to care.

With these efforts, mothers and babies got the same appointments, enhancing adherence and retention. Partner reports show that by February 2014, the 22 sites that received support for retaining mother-baby pairs achieved strong gains—from 2.2 percent to over 60 percent (MOH 2014).

Some teams faced challenges in the initial phases of testing and implementing some of the agreed-on changes.

- When larger facilities started seeing mothers and babies together, it resulted in a heavy workload. To address this, the facilities increased the number of clinic days and divided the mother-baby pairs into groups to be seen on those clinic days.
- Using phone calls to remind mothers about their appointments was not always successful due to clients' phones being switched off, wrong numbers, and other problems. To address this, teams used CLFs and home visits to trace and counsel these mothers.
- Lack of transport to conduct home visits as often as preferred. Some QI teams were able to obtain funds from implementing partners to carry out the visits.
- Improving male involvement in care was a challenge. Men in some areas in the southwestern region had moved to other places for employment or simply did not wish to attend the clinics. The improvement teams tried to address this challenge by involving the VHTs to mobilise men whenever they could.

Integration of NACS into eMTCT using QI:

Integration of NACS into routine eMTCT/MCHN was meant to be district-driven and was scaled up in the six districts based on the availability of resources. The initiative targeted HIV-positive women in the postpartum period, HIV-exposed infants (during the first 1,000 days of life), and health care providers. The key steps in the integration of NACS into eMTCT were then implemented: retaining mother-baby pairs in care to ensure that they receive NACS services; establishing the HIV status of every mother and baby; ensuring optimal ARV coverage for mother and baby if HIV-positive; and providing the recommended NACS package at different points of care.

To strengthen integration, emphasis was placed on timely identification of HIV-positive mothers in all clinics (e.g., ART, antenatal clinics, postnatal clinics, and OPD) for initiation into care. Health facility staff began filling out patient journals to ensure safekeeping of specific patient information and tracking of their progress. Information in the journals was detailed enough to enable health workers to tell in advance when babies of HIV-positive mothers were due for first and second polymerase chain reaction (PCR) testing within 18 months and when mothers had to stop breastfeeding. Such information would aid decision making, mother-baby pairing, and conclusive determination of sero-status on time. (See Annex 6 for an example of a patient journal.)

'Retaining of mother-baby pairs in care was an innovation highly appreciated in Tororo district. Our staff even became champions due to this initiative. One of our midwives in Tororo district was invited to Kanungu district in southwestern Uganda to participate in the Safe Motherhood Day national commemoration. She was recognized for being a mother-baby pairing champion in Mukujju Health Centre IV, which was steadily reducing loss to follow-up of mothers after enrolment. Not only was she self-driven but also passionate in carrying out her duties. The district supported her travel to this event.'

District Health Officer, Tororo district

IYCF was also emphasized as a strong component in NACS integration. Relatedly, aspects of Option B+ were followed, including identification of HIV-positive mothers, recording of their information and follow-up in the community, encouraging them to breastfeed, conducting first and second PCR testing, discontinuation of breastfeeding at 12 months, and giving complementary feeding support. In addition, aspects of eMTCT were emphasized during pregnancy, at delivery, and post-delivery. Routine counselling and nutrition assessment were key components that helped identify acute malnutrition in the mothers and babies and provision of the necessary support and care. Patients who were in ‘yellow’ (i.e., had moderate acute malnutrition as measured by MUAC tape) were counselled, and those in ‘red’ (severe acute malnutrition as measured by MUAC tape) were referred for therapeutic food and further management. PHFS partners that were focused on NACS integration worked vigorously to ensure that participating facilities implemented NACS effectively. To accelerate progress with NACS, health workers were trained in NACS, Option B+, and QI packages. Basic trainings were also provided to CLFs, supportive supervision was conducted in the implementing facilities, and anthropometric equipment was procured and distributed to PHFS implementing facilities. The HMIS manual was revised to include nutrition indicators, and facilities were given HMIS data collection tools. As a result, reporting on nutrition indicators improved.

Due to innovations such as mother-baby pairing, follow-up of clients by the CLFs, and adequate and reliable counselling services, PHFS implementing districts and facilities saw increased demand for NACS and eMTCT services.

Still, notwithstanding the successes in integration of NACS into eMTCT, some challenges were encountered, including:

- A good number of the facility staff did not readily buy into the NACS practises as they considered assessment, counselling, and data capture to be additional work. With continuous coaching, participation of the district leadership, and supervision, the promoted changes were appreciated over time.
- Access to RUTF for acutely malnourished mothers and babies was suboptimal. Lower-level health facilities (community, Health Centres [HC] II and III) did not have therapeutic feeding programmes (and thus had no RUTF) and obtaining RUTF from hospitals was challenging due to long distances and lack of transport. This led to creation of a more decentralized system for distributing RUTF (i.e., from hospitals to HC IV and then on to HC III and HC II) once these facilities had been assessed and had skilled providers.
- The referral system for acutely malnourished clients was not very streamlined given uncertainties about where therapeutic foods could easily be obtained; this meant some clients were lost to follow-up.
- Health workers encountered challenges with mothers not giving reliable information, especially HIV-positive mothers. Cessation of breastfeeding at 12 months was difficult for these mothers either because they could not keep track of when the child turned 12 months or they did not have the resources at home to prepare special complementary foods for their babies. This was highlighted as posing high risk of exposure for the babies.
- Uncoordinated transfers of health workers within districts impacted the pace of integration and often slowed implementation of PHFS.

Community-Level Implementation and Linkages

At the community level, emphasis was placed on establishing and strengthening the capacity of community-level support structures such as CLFs, VHTs, and expert clients to support follow-up of clients; service provision during ART clinics; and generation of demand for NACS and eMTCT services.

Establishing and strengthening community-based actors and structures: Implementing partners trained VHTs and other volunteers attached to the health facilities in community mobilisation, follow-up of clients, and referral. VHTs were also placed at facility testing points so they could identify mothers and follow up with them for return visits. In addition, health facility staff coordinated with the CLFs to ensure patients were followed up in the communities to mitigate loss to care. Some health facilities had family support groups (FSGs) through which messages on nutrition and HIV care were passed on to the communities.

Demonstration activities: The implementing partners demonstrated some of the recommended practises for growing and preparing food. In some districts, such as Jinja, implementing partners and health facilities set up demonstration gardens to teach patients and other community members about various crops that can be produced locally to improve nutrition of their family members. Food preparation demonstrations were also conducted in the community to show community members how to prepare various foods for children and other target groups.



*A demonstration garden at a health facility supported by TASO.
(photo by TASO)*

Demand generation activities: Several activities were conducted at the community level to generate demand for NACS and eMTCT services:

- Music, dance, and drama were used to sensitise and educate communities on HIV and AIDS and promote behaviour change. PHFS implementers trained adult and adolescent drama groups in eMTCT and NACS. Skits on nutrition and eMTCT then were developed and performed in target communities.
- Community dialogues were used to bring community members together to exchange views and experiences on broad aspects of nutrition and come up with solutions. Dialogues were facilitated by health workers, trained VHTs, and occasionally by external facilitators.
- Radio talk shows were broadcast by local stations and through ‘community radios’ (individuals using megaphones in busy trading centres and/or traveling around a village providing information and mobilising communities) to educate communities on topics related to nutrition, inform them about where to seek services, and to advocate on nutrition issues. Speakers on the radio talk shows mainly were health workers.

The benefits of community activities included clarification of misconceptions about foods and feeding practises, diversification of food crops grown by families, greater recognition of VHTs as nutrition champions, and identification of malnourished children. Community members also learned how to carry out basic assessments and mitigate social hindrances such as stigmatization of HIV-positive patients. These activities also helped improve patient-provider relationships and client satisfaction, which are important aspects in quality care provision. The community structures were thus instrumental not only in PHFS implementation at the facilities but also in generating demand for services and strengthening facility-community linkages.

2.7 Monitoring, Supportive Supervision, and Learning

Effective implementation of the PHFS initiative called for proper monitoring and assessments. Monitoring was important to ensure that implementation was occurring as planned. Twenty-one indicators were identified to assess the initiative's progress (see Annex 7); 10 of these, which were nutrition-specific, were targeted for inclusion in the HMIS for countrywide use. Monitoring data from the pilot phase guided the scale-up process.

The MOH and the implementing partners conducted three sets of assessments: the baseline assessment, joint supportive supervision, and the DQA as part of the monitoring, reporting, and data quality check. Other important aspects of the learning process were the learning and harvest sessions. The monitoring, supportive supervision, and learning components are discussed below.

2.7.1 The PHFS Baseline Assessment

To inform the implementation of the PHFS initiative, an in-country baseline assessment was conducted to provide a benchmark for the PHFS indicators for the participating health facilities. The baseline, spearheaded by the MOH, covered areas related to eMTCT (Option B+), NACS, and QI and provided reference point indicators agreed upon by all implementing partners. Findings indicated that:

- There was a huge capacity gap in the three areas, which informed the planning of capacity strengthening sessions.
- Although there was a QI framework that was supposed to be implemented nationally, its functionality in many of the health facilities was weak.
- PMTCT services were provided in all facilities assessed, but use was still low.
- Infant feeding and NACS services were not fully offered, especially nutrition education and counselling, and most facilities did not have a functional lactation clinic for infant feeding and support.
- Most facilities lacked working anthropometric equipment, nutrition job aids, demonstration gardens, and food demonstration kits for educating and counselling in nutrition.
- Retention of mothers and babies was poor and had not been measured in most sites.

The baseline report recommended several measures, including the integration of eMTCT into MCH services.

2.7.2 National Joint Supportive Supervision

Two joint supportive supervision visits were conducted to appraise the overall performance of the PHFS services in selected health facilities to ensure adherence to standards. The first visit was held in March–April 2014, the second was conducted in April 2015. The supportive supervision teams consisted of staff from MOH, FANTA, and the M&E taskforce (which included M&E staff of the respective implementing partners). The joint supervision visits found the following:

- **Staffing and training:** Understaffing of the health facilities continued between the first and the second supportive supervision visits. Training MCH health workers in eMTCT, QI, and NACS improved between the two supervision visits, and health workers were found to be knowledgeable about the PHFS initiative during the second visit. However, integrating the three components for quality service provision to mothers and children remained a challenge between the two visits. Only a few health workers were trained in Option B+ by the time of the second supervision visit.
- **Nutritional assessment and infant feeding:** Health workers at the facilities had adequate knowledge of optimal infant feeding practises and of how to assess infant feeding practises. Infant feeding counselling is given collectively to all mothers during health education and individually to HIV-positive mothers. Nutritional assessments were being conducted for mothers in ANC and HIV-

exposed children using MUAC. The results were documented in the respective registers and/or in the standard care package counter books. The second supervision visit found that 100 percent of the clients initiating breastfeeding in the first hour after birth had received IYCF counselling. However, nutritional assessment for pre-ART and ART clients across all the health facilities was minimal as only a few of the clients' HIV care/ART cards had documented MUAC assessments. The second visit also found that the NACS component was lagging behind despite the fact that the anthropometric equipment had been provided.

- **Antenatal care, labour and delivery, and postnatal care:** The health facilities were providing at least four goal-oriented ANC¹³ visits (with specific services being provided at each visit), labour and delivery services, and postnatal services daily. However, some areas of goal-oriented ANC were not implemented well across all the health facilities, such as testing for haemoglobin, syphilis, and blood pressure. The mother and infant clinical cards/charts were paired and across the facilities, same-day appointments were scheduled for the mother-baby pairs.
- **EID and mother-baby care points:** At the second visit, all health facilities supervised had mother-baby care points that were functional, but limited human resources made it difficult for them to fully provide quality services.
- **Family support groups/psychosocial support groups:** Health facilities had established FSGs, and health workers reported several benefits from the groups, including improved adherence and disclosure and reduced stigma and discrimination. At some health facilities where FSG days were scheduled on service days, health workers reported an improvement in appointment keeping. Male involvement in FSGs had only slightly improved by the time of the second supervision visit.
- **Drugs and supplies management:** At both visits, the health facilities had in stock most drugs, anthropometric equipment, and medical supplies needed to run the PHFS activities. Most of the health facilities visited had no nutritional supplements such as RUTF, F75, and F100. The district and partner staff involved in the activity were asked to ensure that all sites in the district received training on MUAC cutoff points and that facilities replaced all faded MUAC tapes.
- **QI:** QI teams were established in all the facilities, but their performance varied. All health facilities were implementing at least one QI project, most of which were eMTCT projects (e.g., retention of mother-baby pairs and provision of the standard care package). But QI was not being applied to nutrition services in the health facilities.
- **M&E:** All health facilities had in place key registers for PHFS services. However, the majority of registers were old versions, though implementing partners were in the process of procuring revised registers for the health facilities. Some registers, especially the outpatient nutrition register, were not kept up to date. The supportive supervision visits also revealed limited evidence of data use at the health facilities.

2.7.3 The Data Quality Assessment

The DQA was conducted to assess the strengths and weaknesses of the data collected and reported on by the participating health facilities. The DQA results were used to help the PHFS implementers appraise the quality of the data in terms of key data quality dimensions: validity, reliability, integrity, timeliness, and precision. The DQA revealed that there were both under-reporting and over-reporting of certain indicators, while nutrition indicators were not reported in all districts. This was attributed to lack of national data collection and reporting tools. The DQA further showed that while all health facilities had ANC and maternity registers, only 90 percent and 33 percent of the health facilities had EID and outpatient therapeutic care registers, respectively. Incomplete registers were a problem in all

¹³ Goal-oriented ANC is designed to provide particular services at each visit and to respond to each mother's needs, while traditional ANC seeks to promote frequent visits.

facilities, necessitating urgent remedy. Among other things, the DQA recommended immediate printing and dissemination of integrated nutrition registers for all health facilities, conducting regular DQAs, strengthening mentorship for all districts, supporting data use at the health facilities for decision making and performance improvement, tailoring support for lower-level health facilities to offer quality services for HIV-exposed infants as well as record and report data for EID, technical assistance to districts from MOH and implementing partners on reporting, and dissemination of clear indicator definitions.

Stakeholders rated the DQA as very important in ascertaining the status of performance in health facilities, gauging the quality of collected data and data management processes, and determining needed remedial action.

Most of the recommendations from the DQA were implemented. The partners distributed data collection tools and registers, and trained health workers and data staff to use the tools and to handle other data management processes. Several other measures were implemented to improve data collection, quality, and use, which were combined to form the change package for data quality improvement (see Box 4), which was later published and is available online.¹⁴

2.7.4 Experience Sharing and Harvest Meetings

Learning sessions and harvest meetings were a key component of the partnership modalities aimed at fostering sharing, collaborative learning, and adaptation. Learning sessions were supported by the implementing partners in collaboration with the MOH and brought together participants from field locations and implementing partners. Participants included QI teams from facilities and districts. The learning sessions had different purposes but had such shared objectives as:

- Introduce new concepts, such as gender integration into eMTCT care
- Enable site teams to share the changes they had tested to improve focus areas, such as retention of mother-baby pairs and data quality
- Support sites to develop action plans for key focus areas, such as dried blood spot testing, retesting of HIV-negative mothers, IYCF counselling, and care for lactating women
- Introduce and strengthen community-facility linkages to improve identification and referral of pregnant and lactating women as well as exposed babies
- Discuss with teams how best to improve linkages of HIV-positive mothers and their babies to ART clinics after 18 months in the mother-baby care point
- Strengthen health workers' competence in key skills, such as problem analysis, use of documentation journals, and use of data
- Agree on the viable changes tested that could be shared and replicated

Box 4. Change Package for Improving Data Quality

- Assign QI/data focal person to demonstrate how to fill out all the data tools
- Train peer educators on the job on filling out some of the data tools on ART clinic days
- Assign EID focal person/supervisor to check all charts for completeness and accuracy and provide feedback to the clinicians
- Update registers and clients' cards before the mother and baby leave the facility

¹⁴ The data quality improvement change package is accessible at <https://www.usaidassist.org/resources/improving-completeness-and-accuracy-data-elimination-mother-child-transmission-hiv-tested>.

The sessions were facilitated by staff from ASSIST and regional coaches, while the partners from FANTA, SPRING, and TASO provided technical support on nutrition. The facilitators used a variety of methods including presentations, group discussions, brainstorming, peer-to-peer sharing, plenary sessions, and process mapping to make the learning sessions participatory and interesting. During these sessions, a coaching team of two to three national nutrition trainers and implementing partners were mandated to guide the participants on how to work effectively using information generated from supervision visits to the field.

The learning sessions enabled staff from health facilities to come together and learn from one another's strengths, understand weaknesses, and take corrective action. The sessions also gave the teams the opportunity to present progress and challenges with regard to PHFS implementation. During the sessions, data dashboards were projected for the implementers to show progress in tracking PHFS achievements. The sessions also provided a platform for planning and implementing other actions relevant to the PHFS work, such as formation of QI teams.

'It's through the learning sessions that we were able to understand the key aspects around QI, and we actually formed QI health teams in our health facility during one of the learning sessions.'

Health worker, Ntungamo district

As noted, harvest meetings were held to share and consolidate good practises resulting from the changes tested, rank them based on evidence from pilot tests, and discuss the practises' scalability. The harvest meetings also entailed identification of areas that needed further improvement and support. For instance, in some of the mini-harvest meetings, the teams identified the following steps to improve mother-baby pair retention:

- Find out why the clients are not coming back and then try to address the specific reasons rather than making assumptions as to why clients are not returning for care.
- Address the gaps in retention within the facility, e.g., finding mothers and their babies who might be coming for immunisation but not HIV care, linking them to care, and reorganising clinics to be more efficient.
- Link or pair HIV-positive mothers and their babies, e.g., by keeping their clinical charts together at all times.¹⁵

Stakeholders reported that the learning sessions and harvest meetings offered an excellent opportunity for cross-learning and continuous improvement.

As part of the M&E and learning processes, an end-line evaluation and final dissemination meeting had been planned. However, these were never conducted due to challenges in funding mechanisms and mandates, as will be explained in section 3.3.

2.8 Advocacy Activities

Advocacy activities were undertaken to promote the integration of eMTCT and NACS and the use of QI approach, as well as for popularising the PHFS initiative as a whole. Advocacy was done through various channels including the national launch of the PHFS, the Option B+ launch, and various meetings and events such as the World AIDS Day. At district and community levels, advocacy was also done through information, education, and communication materials such as T-shirts, drama performances, video campaigns, client testimonies, and radio talk shows. Some implementers also worked with the

¹⁵ The change care package is accessible at <https://www.usaidassist.org/resources/improving-retention-mother-baby-pairs-tested-changes-and-guidance-uganda>.

media to record and publicize PHFS activities and events. The MOH's leadership and the involvement of the Director General of Health Services also provided an opportunity for advocacy at the ministry level, which, for instance, facilitated the inclusion of the PHFS indicators in the HMIS.

3. Achievements and Constraining Factors

3.1 Achievements and Added Value

Most stakeholders who participated in the consultations to inform the writing of this documentation considered the PHFS initiative a success, saying that it added value to the quality of eMTCT service provision and contributed to HIV-free survival of infants. Specifically, the key achievements include the following:

Integration of NACS into health service delivery: Currently, USAID’s RHITES-SW have continued to integrate NACS into eMTCT services.

Support of the QI policy environment: The use of QI approaches led to system-wide performance improvements, such as strengthened capacities and contribution, finalisation, and launch of the health-sector quality improvement framework and strategic plan–2016/20, as well as the 2015 QI manual. There was increased retention and adherence to care in the implementing health facilities

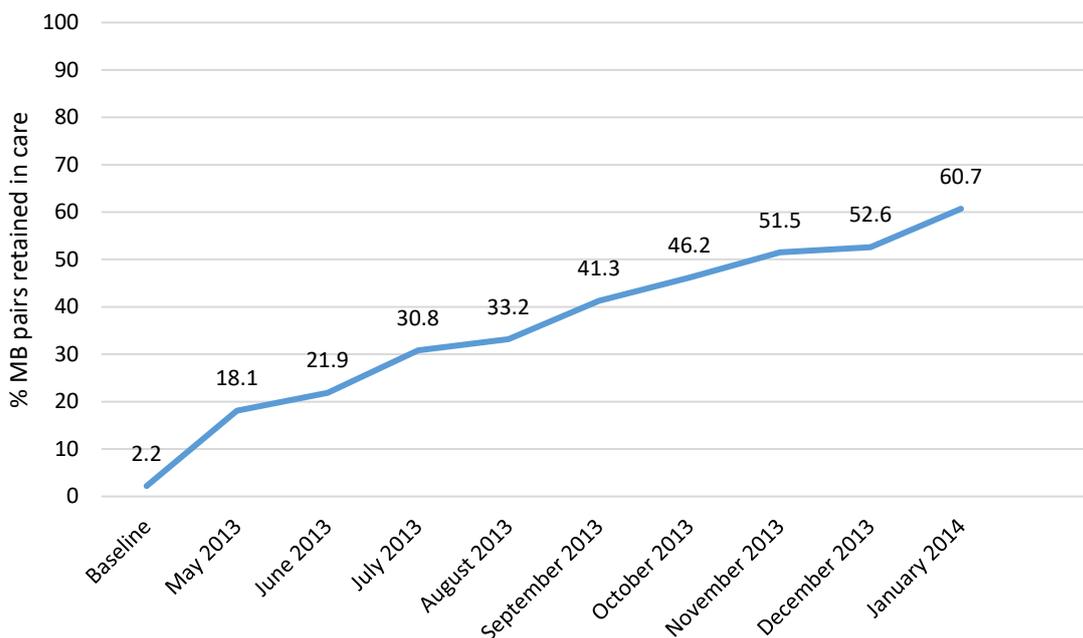
Improved coordination among key stake-holders: With all key partners contributing to implementation of the PHFS initiative, there was need for joint reviews, coordination meetings, joint coaching sessions, etc. This led to improved coordination and communication among the key stake-holders that implemented the initiative.

Increased retention of mother-baby pairs in care: The PHFS initiative led to increased retention of mother-baby pairs in care, which provided an opportunity for them to access critical services and prevent children from getting infected with HIV. Retention of mother-baby pairs in the 22 sites that received retention support increased from an average of 2.2 percent in 2012 to over 60 percent by February 2014 (see Figure 2).

‘We were at 2 percent of mothers retained in care when PHFS was first introduced to our facility but have now moved to 96 percent retention. To us, that shows improvement in care and service provision.’

Health worker, Kisoro Hospital

Figure 2. Percentage of Mother-Baby (MB) Pairs Retained in 22 Pilot Health Facilities (May 2013–January 2014)

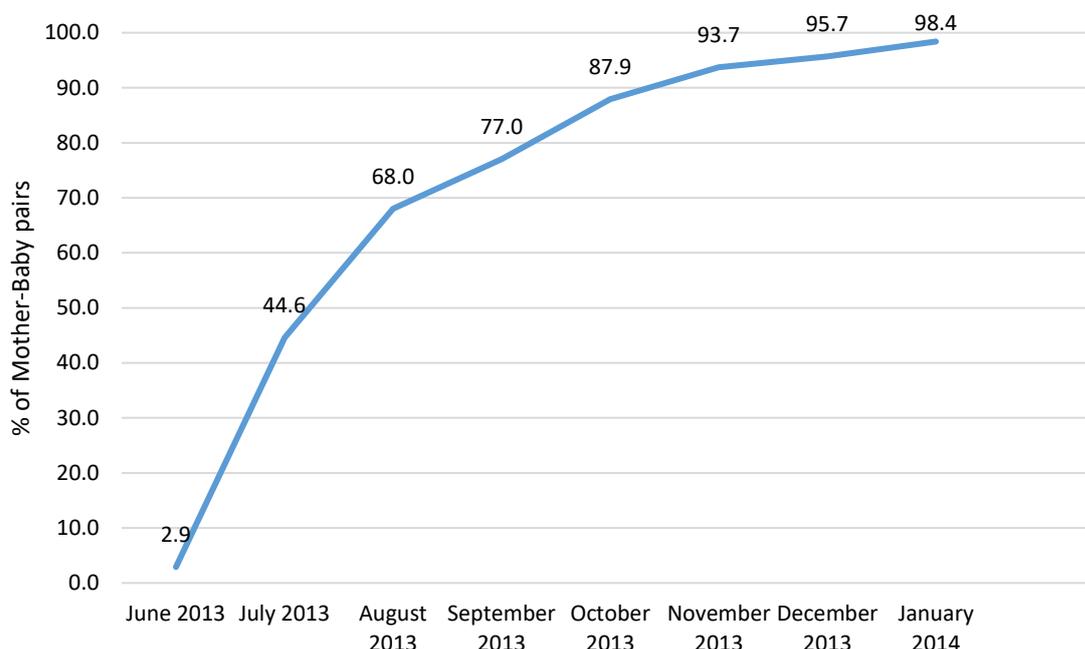


Source: USAID ASSIST data.

Increased adherence to IYCF practises: The increased retention of mother-baby pairs in care also contributed to improved adherence to IYCF practises. Data dashboard results showed that adherence levels in 21 facilities for which baseline data were available increased from an average of 74.8 percent in February–March 2013 to 97.4 percent in June 2014.

Testing innovative changes: Through the PHFS, innovative changes were tested and adapted. One example is the standard care package, developed by the PHFS partners, which provides a practical and scalable innovation that many health facilities will find useful. The package has been adopted by the MOH as a national tool to enhance eMTCT service provision. But the process of testing these changes benefited the mothers and their babies by improving the quality and breadth of services they received. Figure 3 shows the tremendous increase in the percentage of mothers and babies in selected health facilities who received the standard package of services developed by the PHFS partners.

Figure 3. Percentage of Mother-Baby (MB) Pairs Who Received the Standard Package at Routine Visits in 22 Sites (June 2013–January 2014)



Source: USAID ASSIST data.

Better health system performance: The PHFS helped the health facilities and districts accomplish tasks they were supposed to be performing in the first place and do them better. Discussions with various partners revealed that the activities promoted through the initiative did not add to the workload but rather helped the facilities think more about their work and organise it better, collect data, track performance, and use results to improve further. Health facilities had not been doing basic things like proper record-keeping and follow-up of clients due to lack of supervision and a lack of awareness about how important such tasks were. Implementing partners also reported that after the trainings, health facilities started to screen for malnutrition at different care points more regularly and as part of routine care. The focus on integrating NACS into eMTCT using QI was commended as an avenue for not only increasing use of NACS services but also improving service delivery at the health facility due to the trickle-down effect of the quality improvements.

Improved data quality and availability: The initiative helped improve data quality and provide data to inform implementers about the progress of their work. For instance, with more data available, implementers could establish why mothers and babies drop out of care, for instance, why mothers don't take their ARVs or return to the facility on the appointed date. This information helped implementing partners ascertain challenges and devise solutions. The initiative enhanced implementers' ability to measure and track progress and know where each facility stands in terms of retention, adherence, and overall survival of mothers and infants. Performance trends and points of investigation were identified, and the teams were in many cases able to make corrections.

Staff motivation: The PHFS helped establish a highly motivated health facility workforce that was further encouraged to perform better once the QI systems showcased the progress of its work. During implementation and learning sessions, health workers were always eager to know their retention rates, which were top-priority talking points at the learning sessions.

Increased demand for NACS and eMTCT services: Through improved services and community linkage activities, PHFS implementing districts and facilities increased demand for NACS and eMTCT services as evidenced by the increase in the number of clients turning up for these services.

Equipping health facilities: The equipment provided to health facilities for PHFS was useful outside the PHFS initiative. For instance, other clinics were able to use the equipment as needed.

Strengthening the capacity of local health structures: The initiative trained and strengthened the capacities of local structures, such as health facility QI teams, DNCCs, and VHTs. As evidenced by interviews for this documentation, the support and capacity strengthening are thought to have contributed to the overall improvement of the district system for eMTCT, nutrition, and health services in general. These structures continue beyond the life of the PHFS initiative and provide a foundation for implementation of the changes set in motion by the initiative as well as related activities.

Other achievements: The initiative provided the momentum to advocate for the inclusion of nutrition indicators in the HMIS. As noted, the MOH was in the process of reviewing the HMIS indicators at the time the PHFS was being implemented. Because the MOH was actively involved in the implementation

Box 5. Sustaining PHFS Achievements in Uganda

While challenges likely will arise, there are opportunities for the PHFS initiative's changes in Uganda to be sustained and rolled out to the rest of the country. Some PHFS districts have been able to implement the change packages, which were mainstreamed into eMTCT practises in the participating districts, with no external support. This indicates that it is possible for districts to continue implementing the changes and that the MOH can roll out these changes without a lot of resources. In addition, the MOH has made the mother-baby care point a standard practise for all health facilities, which will help perpetuate the improvements.

The MOH also continues to conduct routine supportive supervision visits to health facilities, providing a continuing opportunity for it to monitor the integration of nutrition into eMTCT services. Moreover, the MOH can use the initiative's results to advocate for more resources and other support to roll out the practises promoted through the PHFS.

Lastly, some partners continue to operate in several districts and are well positioned to continue implementing or supporting the changes introduced through the PHFS. For instance, ASSIST is supporting USAID-supported programmes throughout the country, and TASO still operates in Eastern Uganda. While STAR-SW has closed, its successor projects implemented by EGPAF continue to emphasize integrating nutrition into eMTCT. EGPAF has distributed the change package to health facilities so they can implement whatever is possible within their resources.

of PHFS, some of the indicators were included in the HMIS for continuity. PHFS also contributed to the development of guidelines on M&E and on mother-baby pairing by the MOH. The PHFS helped partners to work together—an important shift away from working in silos—and build momentum around nutrition as an essential ingredient of child and maternal health.

3.2 Factors that Enabled the Achievements of the PHFS Initiative

The achievements of the PHFS initiative were enabled in large part by facilitating factors including the following:

Conducive policy environment: The PHFS benefitted from a favourable policy environment accorded by the Government of Uganda. The Government prioritises eMTCT and has in recent years also put nutrition high on the policy agenda. The Government also encourages public-private partnerships, decentralized service delivery, and health systems strengthening. This environment was crucial both for the implementation of the PHFS without government restrictions and for getting MOH involvement and support. Again, the PHFS was launched as the MOH was revising the HMIS indicators and introducing nutrition registers, which provided an opportunity for integrating nutrition indicators into the HMIS.

Working in partnership: The initiative engaged partners with different technical abilities—related to HIV/AIDS, eMTCT, nutrition, QI, national- and district-level leadership, the frontline experience of health facilities, and the community—and helped to leverage this diverse expertise. ASSIST was well experienced in QI as a mandatory implementation strategy. FANTA was supporting multisectoral nutrition activities and had a wealth of experience in leadership and coordination of diverse actors. TASO had a strong community component, which it leveraged into the partnership. SPRING had been supporting nutrition interventions and leveraged this experience to support districts. STAR-SW and STAR-EC were well established in the districts and working with health facilities in HIV, including eMTCT. Both had a good relationship with the districts and health facilities, necessary for such a partnership to work. Pooling all of these skills and abilities was a key factor for the initiative’s success. Working in partnership also enabled actors to learn from one another and to share good practises.

Leadership and a strong coordination mechanism: The MOH’s role as overseer of PHFS implementation ensured that the Government of Uganda took full ownership of the implementation process. This legitimised the process, which was also important for winning the support of districts and health facilities. With the oversight of the MOH, it was possible to ensure that the initiative’s activities were aligned with the Government’s strategies and policies for HIV/AIDS and for nutrition activities essential to HIV survival. The initiative also benefitted from a strong coordination mechanism led by the MOH, with support from FANTA, that involved meetings, joint planning, and reporting.

Opportunities for sharing, learning, and adaptation: The initiative benefitted from the opportunities created for sharing feedback and showcasing progress, learning, and adaptation. Forums such as learning sessions and monthly and quarterly meetings sustained partners’ motivation to continue doing more and doing better. The availability of funds to conduct these planned activities helped to ensure their smooth implementation.

Continuous engagement of partners at all levels: Partners at different levels engaged actively throughout the initiative. The engagement of district leadership starting from the pilot phase made the

‘We have a structure in place for the scale-up process from 4 to 19 health facilities. This would have been a challenging process for the partners, but we engaged the DHO, training him as part of the mentorship team. His role in the district was a key success factor in the scale-up process and his being part of the mentorship team was a motivator for the health workers.’

TASO staff, Tororo district

scale-up process easier and more effective because the district staff were already part of the mentorship teams. The active involvement of district teams, especially the DHTs, also was crucial to the initiative's success.

The QI approach: The QI approach was helpful for overall learning because it emphasised use of data to track and show results. The emphasis on data tracking and data quality enabled partners to see where they were starting from, what they had achieved, and what gaps existed. This enabled them to plan action steps to address gaps and ensure improvement. The use of the QI approach also provided some districts with an opportunity to implement PHFS activities beyond the initiative's life.

3.3 Constraining Factors

The stakeholders who participated in this documentation also pointed out some factors that constrained PHFS implementation. Among these were the following:

Low involvement of stakeholders in the PHFS design: Apart from the MOH, most partners, especially those at the implementation level, indicated that they did not participate in the initiation and design of the PHFS concept. About a half of the district staff that participated in the discussions indicated they were brought on board after the initiative had been launched and the work plan rolled out. As a result, they were not able to quickly understand how the initiative was to be implemented, especially at the district level.

Unclear division of roles and mandates: At the district and facility levels, the roles and specific mandates of the different PHFS implementing partners were also not sufficiently clear. There was no memorandum of understanding between districts and implementing partners to clearly articulate the different mandates. Some stakeholders felt that these issues should have been addressed at the district entry meetings. However, it was noted that these roles became clearer and that some evolved over time following a series of coordination meetings. Some stakeholders felt that the definition of roles between national level partners, especially between FANTA and MOH, was not very clear and that some roles overlapped.

Non-functionality of DNCCs and SNCCs: The activation and rollout of the DNCCs and SNCCs in the implementation did not happen as needed, and hence these structures were not well utilised. The activation and rollout of DNCCs and SNCCs was the mandate of the Office of the Prime Minister, which was not a member of the PHFS and could not respond with urgency to requests for activating these structures. The DNCCs should have played a key role in district-level coordination while the SNCCs would have, for instance, supported the community-level efforts. All this was critical given that in some districts, coordination at district level was not smooth, leading to delays in implementation and difficulties in tracking progress. Where these structures were active, they played key roles and enhanced coordination within the districts.

Inadequate common understanding: The intentions, focus, and implementation modalities of the initiative were not entirely clear to all, and as a result, sometimes there was no common understanding or interpretation of what the initiative aimed to achieve and how this would be best achieved. These differences in conceptualisation also meant that different actors wanted to emphasise different and sometimes conflicting strategies. During consultations for this documentation, some actors felt that too much attention was paid to mother-baby pair retention, while marginalising the nutrition aspects of the intervention. Similarly, there was a narrow focus on IYCF rather than on NACS as a whole. As a result, there was concern that nutrition aspects were not adequately integrated into eMTCT, though this was a core intention of the initiative.

Funding modalities: The MOH, which was the lead agency, had no budget and had to depend on partners to access the funding necessary to execute its mandate. This was in accordance with USG procedures, which at the time did not allow funds to be managed by government agencies in Uganda. To some extent, the situation demoralised the MOH, as it could not initiate or expeditiously execute

some of the planned activities, such as an end-line evaluation and a final dissemination meeting. While the MOH used other venues to disseminate the initiative's results, it would probably have played a more significant role if it had control over the resources needed for its mandate. However, despite the lack of core funding, it is a significant achievement that the partners pooled their technical and financial resources to jointly implement the PHFS.

Little capacity strengthening for MOH: While the PHFS initiative included capacity strengthening at the district, health facility, and community levels, there was no planned effort to better equip the MOH to roll out the changes and continue supporting the districts. Without adequate capacity at the MOH to provide the needed support and supervision, many districts and health facilities may abandon the changes.

Inadequate coordination at global level: The global partners did not have regular meetings and webinars as earlier envisaged. This limited the opportunity for sharing information at that level and promoting cross-country learning and exchange. Similarly, the National Coordination Committee did not meet as frequently as would have been necessary.

Late access to tools and indicators: Data collection tools and indicators were distributed when implementation had already kicked off and some data were not captured, especially in the first year. Some of the initiative's 21 indicators were not captured in the HMIS. This posed a challenge to the facility workers who had to collect data for these indicators on top of collecting HMIS data. Lack of tools to record nutrition data was also a challenge. It was also unclear which partners were responsible for this as well as the overall M&E function. This posed a challenge to the flow of information and to performance and progress monitoring among PHFS partners.

System-wide health sector challenges: PHFS implementation was hindered by some structural challenges that have afflicted the Ugandan health care system for a long time, including shortages of

'We were able to conduct nutrition assessments on the HIV patients, but our facility was not a hub for RUTF. So we would send malnourished clients to the next facility that stocked these therapeutic foods, yet this place is quite a distance away for a sick and weary woman with a baby to walk to. This was our challenge when it came to NACS.'

Health worker, Ntungamo

staff; uncoordinated transfers of trained staff; shortages of equipment and supplies, such as HIV testing kits, registers, and RUTF; and poor motivation among health workers. In some cases, the partners tried innovative ways to surmount these challenges (e.g., organizing emergency supplies to fill gaps), but these challenges were common during implementation. Indeed, integration of NACS was partly affected by stock-outs of RUTF at most hospitals, yet lower health facilities were not operating therapeutic nutrition units. Mentor teams constantly tried to ensure access to emergency stocks of therapeutic foods at facilities through, for example, creation of 'hubs' where other facilities would tender requests. However, given the distances between communities and hospitals where RUTF hubs were located and transport challenges, a good number of clients who were assessed and referred did not reach the hubs, which affected continuity of services and cure rates.

Short duration for implementation: Most stakeholders interviewed for this report also stated that 2 years of implementation was not enough time to make substantial impact. The initiative phased out just when the stakeholders were beginning to appreciate its value and when many changes needed consolidation and support. More time would have been useful to fully institutionalise the initiated changes. On a positive note, some partners, especially the implementers, continued implementation beyond the 2-year period. The initiative also did not have a documented close-out to enable collective learning from the partners and ascertain whether the changes initiated through the partnership should be scaled up throughout Uganda through the MOH.

Implementing partners moving at different pace along the implementation timeline: Some of the activities were delayed, for example rolling out Option B+ preceded NACS activities due to late approval of funds. This led to a delay in implementation of NACS activities and their integration into eMTCT trainings.

4. Best Practises, Lessons Learned, and Recommendations

4.1 Best Practises

The following emerged as best practises during the 2-year implementation of the PHFS:

The care package: The development of the change care package that provides guidance on the set of services and actions to address the needs of mothers and babies and the MOH's willingness to adopt this package was a milestone in the improvement of eMTCT. The package enables health facility staff to track clients and ensure that mother-baby pairs get the same appointments and receive all the elements outlined in the care package at every visit. Sample rank-ordered changes to improve service provision appear in Annex 4.

Mother-baby pairing: The pairing of mothers with their babies ensured that they were attended together by the health workers and enhanced the retention of the pair in care, which directly contributed to their survival.

QI documentation: The documentation of QI processes—for instance, through use of patient journals to record patient information and track their progress—proved to be very useful, enabling health facilities to note when treatments need to be done or when the clients or their babies reached a milestone relevant to their care (e.g., giving birth or a child reaching 6 months).

Working through existing health structures: The initiative worked through existing structures in the districts (e.g., DHTs, DNCCs, health facilities, QI teams) and in the community (e.g., VHTs and CLFs) without creating parallel structures. In addition, at the district level, the eMTCT focal persons and the DHOs played a key role in the implementation of the PHFS activities and in learning sessions. Working through these structures was both cost-effective and likely to contribute to sustainability of the changes promoted. Using community linkage structures helped to ensure that clients were followed up in the communities and supported to access services. This helped retain mothers and babies in care, reduce stigma, and improve information sharing. Using lay workers also helped to bridge staffing gaps in many health facilities.

Inclusion of PHFS indicators in the HMIS: As noted, the PHFS initiative was launched at a time when the HMIS indicators were being reviewed. With the Director General of Health Services serving as the PHFS lead person for the MOH, it was possible to adopt the 10 nutrition-specific indicators into the HMIS. The institutionalization of these indicators into the national information system means that health facilities and districts will continue reporting on them to the national database. This requirement will in turn provide an impetus for the facilities and districts to continue implementing the changes and monitoring their performance.

Continuous learning and adaptation: The regular learning sessions provided a good opportunity for sharing progress, learning from one another, and identifying challenges and solutions. A particularly useful practise during the learning sessions was to show data dashboards highlighting the districts' performances against the indicators and identify areas of good performance and those that need improvement (sample dashboards appear in Annex 8). The new ideas from the learning sessions were tested, and experiences shared in the following learning session. In this way, the PHFS provided a good example of collaborative learning and adaptation. Other aspects of learning included use of district mentorship teams to coach health facility teams and the harvest meetings where key best practises were flagged and adopted. In a broader sense, the institutionalisation of the QI approach, which was previously not applied to eMTCT programmes, led to greater strides in improving eMTCT services, data quality, and data use.

4.2 Key Lessons Learned

The following were noted as key lessons learned from the implementation of the PHFS:

- It is possible for diverse actors to work in partnership. Although PHFS partners had different mandates of their own, they were able to work together, pool resources, and work toward common objectives.
- All partners must be involved early in designing the overall partnership to allow them time to negotiate their roles, responsibilities, mandates, and resources. Most PHFS partners joined after the partnership's main elements were determined, leaving them little choice on what they could or could not do and on what their rights were. Moreover, the partnership's goals and intentions should be made clear from the start.
- Working in partnership requires effective communication, regular information sharing, strong coordination at all levels, and mechanisms to keep partners motivated. The PHFS initiative has demonstrated the benefits of regular coordination meetings, learning sessions, and harvest meetings, all of which provided the space for sharing information, harmonising work plans and strategies, and rejuvenating partners' interest and appreciation for their roles.
- Engaging district leadership starting from the pilot phase was essential to facilitate PHFS implementation. The quality of district leadership and the interest and attitudes of key players from the DHT are important factors for any changes to be introduced and sustained in health facilities.
- Designing innovative capacity strengthening approaches to mitigate health facility staff turnover is critical, especially in the Ugandan context. It is best to have as many personnel as possible trained in each health facility, so the facility can continue implementation when health workers are transferred or move away. Complementary forms of capacity strengthening, such as on-the-job coaching and mentorship, are crucial to bridge gaps created by turnover.
- Records and reporting are important aspects of programming. It is important to involve the records personnel at the health facilities from the beginning to ensure quality reporting.
- Involving expert clients, mentor mothers, or VHTs in recording basic data reduced the health staff's workload.
- The PHFS creates demand for RUTF; low supplies may lead to client dissatisfaction.
- If QI is institutionalised, it can lead to improved service delivery in public health facilities.

4.3 Recommendations

The following recommendations can be considered for any efforts to scale up the PHFS or implement similar initiatives.

For Global Partners

- Future similar initiatives should ensure a more consultative process for design and scale-up.
- USG procedures do not allow donated USG funds to be managed by government agencies in Uganda. Future initiatives could explore having the MOH access funds through other funding agencies, such as WHO and UNICEF.
- Global initiatives require regular meetings by all global partners.
- Future funding for similar initiatives should explore funding mechanisms in which the government takes the lead in the development, implementation, and monitoring of the plan, for better outcomes and accountability.

For the MOH

- The MOH and districts should ensure sustainability and expansion of the effective practises introduced and supported through the PHFS. Partners that still have a presence in the districts should continue to support the changes initiated and promoted through the PHFS. The MOH also should ask non-PHFS partners to consider supporting the roll-out of changes, especially in districts where these partners are already operating. In addition, the MOH should provide clear guidance to the districts so they can continue to implement the changes. To facilitate a well-managed national scale-up, the MOH should consider developing a clear scale-up plan with clear timelines and a minimum change package that all districts can implement without additional resources.
- The MOH should address the bottlenecks to the delivery of NACS supplies in eMTCT and maternal/child health and nutrition settings. This could include training, support supervision, mentorship and coaching of health facilities and districts on integrating nutrition assessment counselling and support in routine health service delivery, and management of acute malnutrition. In the long term, efforts should be made to streamline the purchase and distribution of all nutrition commodities and supplies through the national supply chain.
- The MOH and its partners should ensure that the effective practises introduced and supported through the PHFS are sustained, expanded, and institutionalised through policies and guidelines. The MOH should liaise with the Ministry of Education and Sports to include the PHFS package (eMTCT, NACS, and QI) in the pre-service training of nurses and midwives.
- The MOH should include the PHFS indicators into the routine supportive supervision and mentorship tools.
- The MOH should routinely provide HMIS tools that capture PHFS indicators.
- The MOH and partners should promote shifting more NACS and eMTCT-related tasks to volunteers. The MOH and partners should conduct a retrospective study to both determine the PHFS initiative's impact on the number of HIV-related infant deaths in the implementing health facilities and to assess sustainability of the changes initiated through the PHFS two to three years after phase-out.
- The MOH should advocate and mobilise resources for scaling up the PHFS countrywide.
- The MOH should strengthen community linkages with health facilities in order to improve rates of service utilisation and health outcomes.

For Implementing Partners

- Implementing partners that continue to operate in Uganda should continue to support districts and health facilities to implement PHFS practises and should support the rollout of PHFS practises in additional districts.
- There is a need for a PHFS initiative end-line evaluation of the 2-year initiative.

For Districts

- District health and human resource offices should coordinate to ensure that transfers of trained staff do not disrupt ongoing performance improvement programmes at the health facilities. For instance, when trained staff are transferred, they should be replaced with staff that has similar knowledge and skills.
- The districts should incorporate the best practises/lessons learned from the PHFS into the district work plans.

For Health Facilities

- Health facilities should continue to implement the best practises of the PHFS.
- Health facilities should continue to collect, monitor, report, and use the data on the PHFS indicators.

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Annex 1. Methodology for the Documentation

Qualitative methods were used to collect data for this documentation. Data were collected through field visits to the participating districts and health facilities, interviews with key informants from partners, and a desk review of key documents. Each of these methods is elaborated on below.

Document Review

A review was done of all relevant documents and reports relating to the PHFS. Documents reviewed included:

- PHFS Technical Manual (2012)
- PHFS Uganda launch meeting presentations
- PHFS Global Launch presentations and documents
- PHFS Phase I Baseline Report (2014)
- Lists of PHFS and NACS indicators
- Completed baseline tools for different health facilities
- District summaries from PHFS baseline
- Completed routine DQA (RDQA) multi-indicator sheets by each district
- Supportive supervision reports
- Data Quality Assessment Report (May 2015)
- Learning sessions reports (Reports 1–5)
- PHFS Uganda dashboards
- PHFS partner progress reports from TASO, USAID ASSIST, SPRING, FANTA, and MOH

Field Visits to Districts and Health Facilities

The PHFS field visits and consultations were conducted between November 22–December 11, 2015. These consultations were conducted in the PHFS initiative districts of Jinja, Tororo, Manafwa, and Namutumba in eastern Uganda and Ntungamo and Kisoro in southwest Uganda. Participants were drawn from staff from collaborating district health offices and selected health facility staff.

Additional key interviews were conducted at the national level. These were conducted with the MOH and key partner staff from the six PHFS implementing partner organizations: USAID ASSIST, SPRING, TASO, FANTA, STAR-EC, and STAR-SW. These interviews helped to shed light on partner experiences and their views about what went well or not, what was learned, and what could be changed for future similar initiatives.

Table A. Key Informant Interviews Conducted

District	Number of district health staff interviewed	Number of health facilities visited	Number of health workers interviewed
Kisoro	2	1	1
Ntungamo	4	2	7
Manafwa	5	–	–
Tororo	4	–	–
Jinja	4	1	1
Namutumba	2	–	–
Total	21	4	9

Data Collection Tools and Themes

Interview guides with questions tailored around four key thematic areas were used. The four thematic areas were:

1. Design (overarching design of the PHFS Initiative)
2. Partnerships and coordination (interactions among implementing partners, the MOH, and USAID)
3. Implementation (provision of services at PHFS implementation sites)
4. Integration of NACS in eMTCT using QIQI

Data Analysis

The analysis process involved review of the interview notes and recordings. The information was transcribed according to the four thematic areas for the assessment.

Table B. Cadres of PHFS Implementers Consulted in FANTA-Led Field Visits to Districts and Health Facilities

National/district	# Officials interviewed	Cadre interviewed	Health facility visited	# Health facility staff visited	Health facility cadre interviewed
National level/ Kampala	6	USAID ASSIST: Senior Quality Improvement Officer TASO: Ag. Director, Programmes; Manager, Health Systems Strengthening SPRING: Programme Coordinator STAR-SW: Senior Technical Advisor, PMTCT MOH: PHFS Focal Person, Programme Manager, AIDS Control Programme			
Kisoro	2	District Nutritionist, QI team leader	Mutolere Mission Hospital	1	Nursing Officer
Ntungamo	4	Assistant District Health Officer (DHO)/MCHN/CH focal person, District Health Educator/eMTCT focal person Assistant DHO/reproductive health/focal person	Kitwe Health Centre IV Ruhaama Health Centre III	3 4	Nursing Officers (2) Medical Officer (1) Enrolled Nurses

National/ district	# Officials interviewed	Cadre interviewed	Health facility visited	# Health facility staff visited	Health facility cadre interviewed
Manafwa	5	DHO TASO Mbale: District Health Systems Strengthening (DHSS) focal person, Psychosocial Officer/NACS focal person, Psychosocial Officer, Medical Coordinator			
Tororo	4	DHO TASO Tororo: Medical Coordinator, Centre Manager, DHSS focal person			
Jinja	4	TASO Jinja: DHS focal person, psychosocial focal person STAR-EC Jinja: HIV Specialist (mother-to-mother team leader),	Jinja Referral Hospital	1	Senior Nursing Officer
Namutumba	2	QI Coordinator: District Health Team Member SPRING Namutumba: M&E Analyst			

Annex 2. Field Consultation (Assessment) Interview Guide

- 1. Design:** What are partners' perceptions of the overarching design of the PHFS initiative in Uganda? *(What key aspects of the design made the initiative work well? And what were the gaps in the design of the initiative?)*
- 2. Partnerships and coordination:** What did the PHFS 'partnership' look like in Uganda? *(Was it formal or informal? Were roles/responsibilities clearly stated from the beginning? Did roles and responsibilities evolve over time? What facilitating factors supported the partnership? How best should the partnership be structured and organised for future reference?)*
- 3. Roles and responsibilities:** 'Who' was meant to be doing 'what', 'when,' and 'where'? *(How did coordination occur between partners in practice? What were the key gaps and challenges in coordination between partners? What were the lessons learned that can inform similar initiatives in future? How instrumental were the PHFS initiative experience and sharing events in shaping the PHFS agenda in the country?)*
- 4. Implementation:** What did the implementation of PHFS services look like? *(What was being provided that was different via the PHFS? What were the challenges with PHFS-related service provision? What was learned with the rapid scale-up from 24 to 108 facilities within the 2-year timeframe?)*
- 5. Integration:** What did the process of implementation look like? *(How did the PHFS initiative address integration of NACS into eMTCT? What added value did the quality improvement approach bring to eMTCT services? How was the initiative able to address community-facility linkages? Was the linkage strengthened?)*

Annex 3. Anthropometric and Food Demonstration Equipment Distributed in Namutumba District by SPRING

Unit	Description	Health facility						
		Nsinze HC IV	Magada HC III	Namutumba HC III	Ivukula HC III	Bukonte HC III	Bulange HC III	Nabisoigi HC III
Food demonstration items								
Pieces	Plastic dolls for breastfeeding demonstrations	1	1	1	1	1	1	1
Pieces	Sauce pans	2	2	2	2	2	2	2
Sets	Plastic container sets	3	3	3	3	3	3	3
Pieces	Teaspoons	2	2	2	2	0	2	2
Pieces	Knives	1	1	1	1	0	0	0
Pieces	Mingling stick with crushing bottom	1	1	1	1	0	0	0
Anthropometric equipment								
	MUAC tapes (6–59 months)	0	0	0	0	50	50	50
	MUAC tapes (5–9 years)	0	0	0	0	50	50	50
	MUAC tapes (10–14 years)	0	0	0	0	50	50	50
	MUAC tapes (15–17 years & adults)	0	0	0	0	18	18	18
	Neonatal scales	0	0	0	0	0	1	1
	Adult standing scales	0	0	0	0	0	2	2
	Height rollers	0	0	0	0	0	2	2

Annex 4. Rank-Ordered Changes to Improve Services Provided to Mother-Baby Pairs at Routine Visits

Change to improve the quality of services provided to mother-baby pairs at routine visits, so each pair receives standard care package	Evidence from pilot tests	Relative importance	Simplicity (not difficult or complex)	Scalability	Total rating
Drugs dispensed in the same area where mother-baby pairs are seen	5	5	4.4	4.6	19
EID and ART clinics (services for the exposed baby and HIV-positive mother) merged	4.8	5	4.6	4.6	19
Counter book/form to keep a record of who received all the services	4.8	4.4	4.2	4.4	17.8
Mother's and baby's cards completely filled out before the pair leaves the clinic	5	4.2	4.2	4.4	17.8
On-the-job training of health workers and expert clients to provide services such as nutrition assessment using MUAC, IYCF guidelines	4.4	5	4.2	4	17.6
Reminder notes placed on the wall to remind clinicians and midwives about the services and updating the cards	3.6	4.6	4.4	4.2	16.8
Mothers informed about the services to expect so they can remind health workers in case a service is not provided	3.6	4.8	3.8	3.8	16
Assignment of roles within the clinic so that all services could be provided	3.6	5	3.2	3.4	15.2

Source: MOH. 2014. *Improving Quality of Services Provided for HIV-Positive Mothers and Their Babies at Routine Visits: Tested Changes and Guidance from Uganda.*

Annex 5. Change Package for Retention of Mother-Baby Pairs in Care: Rank-Ordered Changes to Improve Retention of Mother-Baby Pairs in Care

Change to improve retention of mother-baby pairs in care	Evidence from pilot tests	Relative importance	Simplicity (not difficult or complex)	Scalability	Total rating
Mother and baby seen together in the clinic on the same appointment date	5	5	4.8	4.8	19.6
Priority given to mother-baby pairs	4.2	4.6	4.6	4.6	18
Write appointment date on medicine bottle	3.4	4.8	4.6	4.6	17.4
Give mother and baby just enough drugs to last until the next appointment	3.6	4.6	4.6	4.4	17.2
Pair mothers' and babies' cards together, and have clinicians/dispensers remind them of appointments	4	4.5	4.3	4.3	17.1
New clients seen where they are tested	4.25	4.25	3.5	5	17
Provide a special clinic day for mothers and children to be seen	3.4	4.6	4	4	15.6
Give mother and baby the same appointment date only	3.8	5	3.2	3.4	15.4
Expert patients follow up with lost mothers and mothers who miss their appointments	4	5	3	3.2	15.2
Asking mothers to come with their babies before services are provided	3.4	3.4	3.6	3.6	14
Use of mentor mothers to trace, counsel, and return mother-baby pairs to care	3	4.2	3	2.4	12.6
Phone calls	2.8	4.8	2.3	2	11.9
Involving service providers in regular meetings	3	3	2.5	3	11.5
Male involvement in family support groups	2.8	4.8	1.6	1.8	11

Source: MOH. 2014. *Improving Retention of Mother-Baby Pairs: Tested Changes and Guidance from Uganda*. Kampala.

Note: Parameters are scored 1–5. A score of 1 meant there was insufficient evidence from the pilot, the change was not important, it was too complex, or it was not scalable. A score of 5 meant there was strong evidence from the pilot or that the change was very important, simple, and scalable.

Annex 6. Sample of a Patient Journal

ART no. for mother	Exposed infant No.	ARVs for mother	Citrix/ Nevirapine for baby	IYCF counselling (specify topic name)	Nutrition assessment for mother (MUAC & BMI)	Nutrition assessment for baby (MUAC for 6 weeks above)	Next appointment date	Comments
-	-	-	-	-	-	-	-	-

Annex 7. The 21 PHFS Indicators Assessed

#	Indicator
1	Number of pregnant women with HIV status known before their first ANC visit
2	Percentage of pregnant women with known HIV status (includes women who were tested for HIV and received their results)
3	Percentage of pregnant women who were counselled, tested, and given results
4	Percentage of HIV+ mothers initiated on ART
5	Number of mothers re-tested later in pregnancy, labour, or postpartum
6	Percentage of HIV-exposed infants tested for HIV at 6 weeks (1st PCR)
7	Percentage of exposed infants whose DNA PCR results were given to caregiver 1st PCR: 2nd PCR:
8	Percentage HIV-exposed babies given ARV prophylaxis
9	Percentage of HIV+ mothers who receive IYCF counselling at each visit
10	Number of HIV+ pregnant and lactating women given maternal nutrition counselling each visit
11	Percentage of HIV+ mothers initiating BF within 1 hour of birth
12	Percentage of HIV+ mothers reporting to be adhering to recommended IYCF practises
13	Proportion of HIV+ pregnant and lactating mothers who at each monthly visit receive nutrition assessment
14	Proportion of HIV+ pregnant and lactating mothers who receive nutrition assessment every quarter
15	Proportion of exposed infants who receive nutrition assessment every month
16	Proportion of HIV+ mothers who are found to be malnourished during the reporting period SAM: MAM:
17	Proportion of exposed infants found to be undernourished and receive therapeutic or supplementary feeding support at any point during the reporting period
18	Proportion of HIV-positive mothers found to be undernourished and receive therapeutic or supplementary feeding support at any point during the reporting period
19	Percentage of exposed infants with acute malnutrition at the 18-month follow-up visit
20	Proportion of HIV-positive infants who are found to be malnourished during the reporting period 0–6 months: 6–12 months:
21	Percentage of HIV-exposed children testing positive \geq 18 months of age

Annex 8. Sample of PHFS Dashboards Displayed during Learning Sessions



Partnership for HIV-Free Survival Dashboards at Baseline (April 2013) and January 2015 in 22 USAID ASSIST-Supported Demonstration Sites in Uganda

PHFS Baseline - April 2013														PHFS January 2015																	
HCT in ANC	ART initiation for Pregnant Women	Retention of HIV Negatives	DBS at 6 weeks	DBS Results	ART Prop.	Matern. nutrition	YCF Counseling	EBF within 1 hour of birth	Reported Adherence to YCF practices	Nutrition assessment (mothers)	Nutrition assessment (infants)	Retention of mother-infant pairs	Infants testing positive at final	Data Quality	Health Unit	HCT in ANC	ART initiation for Pregnant Women	Retention of HIV Negatives	DBS at 6 weeks	DBS Results	ART Prop.	Matern. nutrition	YCF Counseling	EBF within 1 hour of birth	Reported Adherence to YCF practices	Nutrition assessment (mothers)	Nutrition assessment (infants)	Retention of mother-infant pairs	Infants testing positive at final	HEI who get their second DBS	HEI who get their final rapid test
94.9	43.4	0	90.4	3.08	94.4	0	ND	96.1	100	ND	10	ND	ND	0	Kisoro Hosp	100	100	100	55	55	100	100	100	100	100	100	100	100	0	100	100
53.8	66.6	0	61.9	14.2	ND	ND	43	80.9	80.96	71.43	ND	ND	ND	0	Rubuguri HCIV	100	100	100	100	100	100	100	100	100	100	100	100	100	0	100	100
96.6	30	0	85.7	85.7	82.6	ND	86	85.7	85.7	ND	ND	ND	ND	0	Kitwe HCIV	100	71	100	47	89	100	100	100	100	94	99	100	83	0	87	80
89.8	70.3	0	100	90.4	100	100	100	100	100	100	ND	ND	ND	0	Itojo Hospital	100	100	100	67	7	100	100	100	100	99	99	100	80	0	0	100
79.3	86	0	80	83	86	ND	86	85	86	ND	ND	ND	ND	0	Namutumba HCIII	100	100	100	100	100	100	100	100	100	97	100	100	96	0	100	100
76.4	57.1	0	71.4	47.6	100	ND	42	100	75.3	ND	ND	ND	ND	0.1	Magada HCIII	100	100	100	NEI	100	100	100	100	100	100	100	100	88	0	100	100
RK	31	ND	79.9	37.9	79	ND	79.1	89.9	ND	ND	ND	ND	ND	0	Bugembe HCIV	100	100	100	89	63	100	100	100	100	100	100	100	83	0	88	100
96	39.2	ND	34.9	RK	RK	ND	NR	100	NR	ND	ND	ND	ND	0	Buwenge HCIV	100	100	100	71	75	100	100	100	100	100	100	100	88	50	75	100
100	9	ND	59	48	77.3	ND	RK	55.9	90.6	ND	ND	0	3.95	0.00	Mpumudde HCIV	100	100	100	50	44	100	100	100	100	96	100	100	72	0	100	100
98.6	27.9	ND	42.9	86.7	100	100	100	100	47.1	100	ND	ND	ND	0	Tororo Hospital	100	90	98	89	76	100	100	100	93	99	100	100	91	0	92	100
100	90.7	ND	100	31	27.7	ND	ND	100	86	17.4	ND	ND	ND	0	Nagongera HCIV	100	100	100	71	44	100	100	100	100	100	100	100	100	11	100	100
100	38.4	ND	41.5	39.4	100	ND	100	100	78.3	ND	ND	ND	ND	0	Mukujuu HCIV	100	100	100	100	100	100	100	100	100	100	100	100	100	0	100	100
100	72.2	99.6	0	0	100	95.8	0	95.8	17.3	11.1	ND	ND	ND	0	Bubulo HCIV	100	100	93	67	67	NPD	100	100	NPD	100	100	100	94	NDC	100	100
61	33.07	35.5	18.9	34.3	100	0	100	100	69.8	0	ND	ND	ND	0	Bugobero HCIV	100	100	100	84	50	100	NPD	100	100	NPD	100	100	89	0	100	100
96	25	0	40	92	31	0	100	100	74	0	0	ND	ND	0	Rubaare HCIV	100	100	100	33	42	100	100	100	100	98	91	100	65	0	86	82
71	0	0	25	100	60	0	100	100	70	0	0	ND	ND	0	Ruhaama HCIII	100	50	100	NEI	50	100	100	100	100	100	100	100	84	0	100	100
100	7	ND	37	47	100	0	100	100	64	0	0	ND	ND	0	Malaba HCIII	100	50	85	0	100	100	100	100	100	100	100	100	74	0	0	100
99	100	ND	67	85	100	0	100	100	92	0	0	0	ND	0.2	Ivukula HCIII	39	NP+	100	38	38	100	100	100	100	100	100	100	96	0	50	100
77	6	0	10	0	60	0	0	100	100	ND	ND	ND	ND	0	Muramba HCIII	100	100	NEI	NEI	100	100	100	100	100	91	100	100	69	NDC	NEI	NEI
77	6	0	14	50	21	0	100	100	57	ND	ND	ND	ND	0	Busanza HCIV	100	NP+	100	0	0	NPD	100	100	NPD	100	100	100	100	0	100	100
93	100	0	39	54	98	0	38	94	83	0	0	ND	ND	0	Magale HCIV	100	100	100	40	71	100	100	100	100	96	100	100	75	67	100	100
94	77	0	0	0	0	0	100	100	25	0	0	0	ND	0.3	Bubuto HCIII	80	0	100	100	100	100	100	100	100	100	100	100	60	0	NEI	NEI

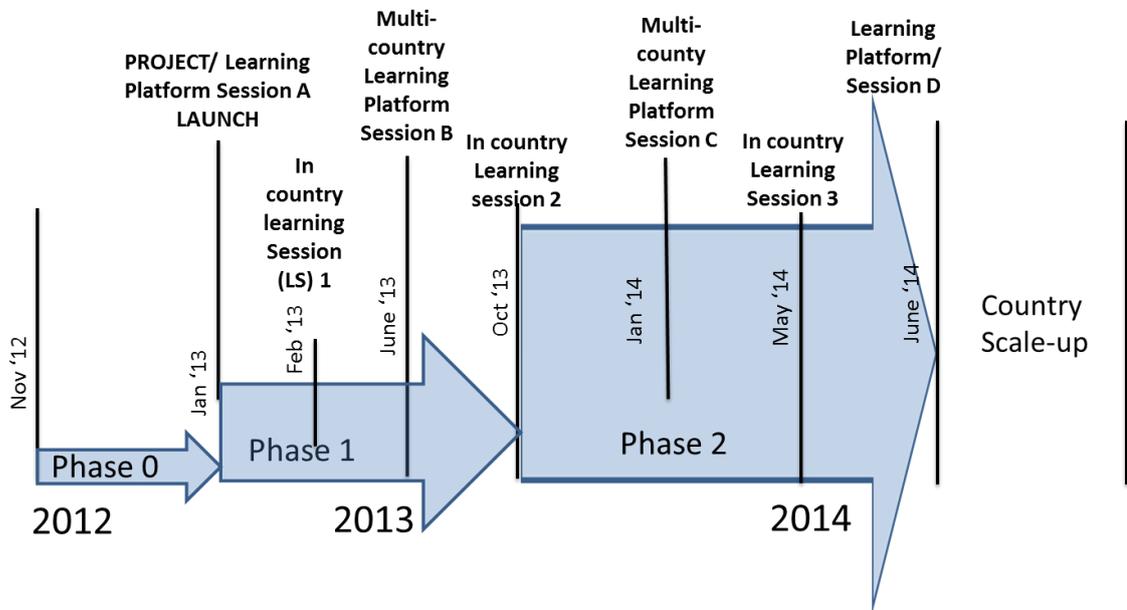
Key

Good	Performing at 90% or more for that indicator or meeting standard for that indicator (for "Infants testing positive at final" good = less than 5%)
Fair	Performance is between 60-89%
Poor	Performance for that indicator is less than 60%
ND	No Data
RK	Record Keeping Issue
NP+	No HIV positive women found
NEI	No exposed infants reported
NPD	No HIV positive deliveries
NDC	No Discharges
NE	No eligible infant



Annex 9: The PHFS Initiative Implementation Timeline

Project Timeline



Annex 10: List of Contributors

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