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USAID
ASSIST PROJECT
*Applying Science to Strengthen
and Improve Systems*

**USAID APPLYING SCIENCE TO
STRENGTHEN AND IMPROVE SYSTEMS**

Annual Performance Monitoring Report FY16

Cooperative Agreement No.:

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Performance Period:

October 1, 2015 – September 30, 2016

NOVEMBER 15, 2016

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DISCLAIMER

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ACRONYMS

AAP	American Academy of Pediatrics
ACNM	American College of Nurse Midwives
ACTS	Accelerating Children's HIV/AIDS Treatment Initiative
AE	Adverse events
AGYW	Adolescent girls and young women
AIDS	Acquired immunodeficiency syndrome
AIIMS	All India Institute of Medical Sciences
AIMGAPS	Assuring Infants and Mothers Get All PMTCT Services
AMTSL	Active management of the third stage of labor
ANC	Antenatal care
AOR	Agreement Officer's Representative
APC	USAID Advancing Partners and Communities Project (Botswana)
APHIA	AIDS, Population, and Health Integrated Assistance (Kenya)
ART	Antiretroviral therapy
ARV	Antiretroviral virus
ASHA	Accredited Social Health Activists (India)
ASSIST	USAID Applying Science to Strengthen and Improve Systems Project
BFHI	Baby Friendly Hospital Initiative
BLC	Building Load Capacity
BMJ	British Medical Journal
BP	Blood pressure
BPI	Brief Physician Interventions
BPJS	Badan Penyelenggara Jaminan Sosial (Indonesian Social Security System)
CBO	Community-based Organization
CCN	Cambodia Council of Nurses
CCP	Center for Communication Programs
CDC	U.S. Centers for Disease Control and Prevention
CEA	Cost-effectiveness analysis
CFR	Case fatality rate
CHC	Community health center
CHMT	Council Health Management Team (Tanzania)
CHMT	County Health Management Team (Kenya)
CHW	Community health worker
CMC	Cambodian Midwives Council
CME	Continuing medical education
COE	Center of Excellence
COP	Chief of Party
COR	Continuum of Response
CPHL	Central Public Health Laboratories
CQI	Continuous quality improvement
CSCOM	Community health center (Mali)
CSI	Child Status Index

CSO	Civil society organizations
CSW	Commercial Sex Worker
CTC	Care and Treatment Clinic (Tanzania)
DBS	Dried blood spot
DC	District Council
DCC	District Council of Cambodia
DCPT	District Child Protection Teams
DCS	Department of Children Services (Kenya)
DHIS	District Health Information Software
DHMT	District Health Management Team
DHO	District Health Officers
DHS	Demographic and Health Survey
DMH	Direction Medicine Hospitaliere (Côte d'Ivoire)
DNA	Deoxyribonucleic acid
DOD	Department of Defense
DOH	Department of Health
DRC	Democratic Republic of Congo
DSW	Department of Social Welfare
DSWO	District Social Welfare Office
DTU	Diagnostic and treatment units
EAR	Engagement, adherence, and retention
EGPAF	Elizabeth Glaser Pediatric AIDS Foundation
EID	Early infant diagnosis
EIMC	Early infant male circumcision
EmONC	Emergency obstetric and newborn care
EMRO	Regional Office for the Eastern Mediterranean (WHO)
eMTCT	Elimination of mother-to-child transmission of HIV
ENAP	Every Newborn Action Plan
ENC	Essential newborn care
EONC	Essential obstetric and newborn care
EPCMD	Ending Preventable Child and Maternal Deaths
EQA	External Quality Assessment
FANTA	Food and Nutrition Technical Assistance Project
FOG	Fixed obligation grants
FP	Family planning
FY	Fiscal year
GBV	Gender-based violence
GDA	Global Development Alliance
GHeL	Global Health eLearning Center
GLL	Global Learning Laboratory
GOI	Government of India
GOL	Government of Lesotho
GTL	Global technical leadership
HAPIE	Hospital Accreditation Process Impact Evaluation

HBB	Helping Babies Breathe
HBC	Home-based care
HBS	Helping Babies Survive
HC3	Health Communication Capacity Collaborative
HCI	USAID Health Care Improvement Project
HCW	Health care worker
HEI	HIV-exposed infant
HES	Household economic strengthening
HFG	Health Finance and Governance Project
HIV	Human immunodeficiency virus
HIWA	Health Initiatives in the Workplace Activity
HMIS	Health management information system
HMS	Helping Mothers Survive
HQ	Headquarters
HR	Human resources
HRH	Human resources for health
HSAA	Health Systems Assessment Approach
HSPH	Harvard T.H. Chan School of Public Health
HSS	Health systems strengthening
HTC	HIV testing and counseling
HTS	HIV testing services
HWD	Health workforce development
IAP	Indian Academy of Pediatrics
ICAP	International Center for AIDS Care and Treatment Programs
ICF	Intensified case findings
IEC	Information, education, and communication
IHI	Institute for Healthcare Improvement
IMAM	Integrated Management of Acute Malnutrition
IMNCI	Integrated management of neonatal and childhood illnesses
IP	Implementing partners
IPC	Infection prevention and control
IPCHS	Integrated People-Centered Health Services
IPPF	International Planned Parenthood Federation
IPT	Isoniazid preventive therapy
IRB	Institutional Review Board
IST	In-service training
IUD	Intrauterine device
JCI	Joint Commission International
JHU CCP	Johns Hopkins University Center for Communication Programs
JHU	Johns Hopkins University
K4H	Knowledge for Health
KAP	Knowledge, attitudes, and practices
KARS	Komisi Akreditasi Rumah Sakit (National Health Care Accreditation Commission – Indonesia)

KCCA	Kampala Capital City Authority
KM	Knowledge management
KMC	Kangaroo mother care
KMTC	Kenya Medical Training College
KQMH	Kenya Quality Model for Health
LAC	Latin American and Caribbean
LAM	Lipoarabinomannan
LGA	Local government authority
LGBTI	Lesbian, Gay, Bisexual, Transgender or Intersex
LIFT	Livelihoods and Food Security Technical Assistance Project
LMIC	Low- and middle-income countries
LTFU	Lost to follow-up
M&E	Monitoring and evaluation
M2M	Mother 2 Mothers (South Africa)
MAM	Moderate acute malnutrition
MC	Male circumcision
MCH	Maternal and child health
MCSP	Maternal and Child Survival Program
MDR-TB	Multidrug-resistant tuberculosis
ME	Middle East
MGLSD	Ministry of Gender, Labor, and Social Development (Uganda)
MLSS&S	Ministry of Labor, Social Security, and Services (Kenya)
MMC	Medical male circumcision
MMR	Maternal mortality rate
MNCH	Maternal, newborn, and child health
MNH	Maternal newborn health
MOGCDSW	Ministry of Gender, Children, Disability, and Social Welfare (Malawi)
MOH	Ministry of Health
MOHCDGEC	Ministry of Health, Community Development, Gender, Elderly and Children (Tanzania)
MOHSS	Ministry of Health and Social Services (Namibia)
MOSD	Ministry of Social Development (Lesotho)
MPDR	Maternal and Perinatal Death Review
MRS	Medical record system
MSH	Management Sciences for Health
MTCT	Mother-to-child transmission
MUAC	Mid-upper arm circumference
MVC	Most vulnerable children
MVCC	Most Vulnerable Children Committee (Tanzania)
N/A	Not applicable
NACS	Nutrition assessment, counselling, and support
NACSCAP	Nutrition Assessment Counselling and Support Capacity Building Project
NASCOP	National AIDS and STI Control Program (Kenya)
NCCS	National Council for Children Services (Kenya)

NCD	Non-communicable diseases
NDOH	National Department of Health (South Africa)
NGO	Non-governmental organization
NMCP	National Malaria Control Program
NMS	National Medical Stores
NVP	Nevirapine
OHA	Office of HIV/AIDS (USAID)
OHS	Office of Health Systems (USAID)
OPD	Outpatient department
ORS	Oral rehydration therapy
OVC	Orphans and vulnerable children
PAHO	Pan American Health Organization
PCC	Pharmacy Council of Cambodia
PCIHS	People-centered Integrated Health Services
PCR	Polymerase chain reaction
PDOH	Provincial Department of Health (South Africa)
PDSA	Plan-Do-Study-Act
PE/E	Pre-eclampsia/eclampsia
PEPFAR	U.S. President's Emergency Plan for AIDS Relief
PHC	Primary health care
PHFS	Partnership for HIV-Free Survival
PHMT	Provincial Health Management Team (Burundi)
PITC	Provider-initiated testing and counseling
PLHIV	Persons living with HIV
PMO	Provincial Medical Officer
PMTCT	Prevention of mother-to-child transmission of HIV
PNC	Postnatal care
PNLS	National AIDS Control Program (Burundi)
POC	Point of care
PPFP	Postpartum family planning
PPH	Postpartum hemorrhage
PSI	Population Services International
PSS	Psychosocial support
QA	Quality assurance
QAD	Quality Assurance Department
QI	Quality improvement
QIF&SP	Quality Improvement Framework and Strategic Plan (Uganda)
QIP	Quality improvement plan
QIT	Quality improvement team
QUHC	Quality and Universal Health Coverage
R&E	Research and evaluation
R4D	Results for Development
RBF	Results-based financing
RCH	Reproductive and Child Health (Tanzania)

RDT	Rapid diagnostic test
REPSSI	Regional Psychosocial Support Initiative
RH	Reproductive health
RHMT	Regional Health Management Team
RMNCH	Reproductive, maternal, newborn, and child health
RMNCH+A	Reproductive, Maternal, Neonatal, Child, and Adolescent Health (India)
RTI	Respiratory tract infection
RUTF	Ready-to-use therapeutic food
S&T	Survive and Thrive
SAM	Severe acute malnutrition
SBCC	Social Behavior Change Communication
SCC	Safe Childbirth Checklist
SDS	Strengthening Decentralization for Sustainability (Uganda)
SEARO	Regional Office of WHO for South Asia
SFH	Society for Family Health
SIMS	Site Improvement through Monitoring System
SMaCKM	Safe Male Circumcision Knowledge Management Study
SMC	Safe male circumcision
SMGL	Saving Mothers Giving Life
SMS	Safe management support
SOP	Standard operating procedure
SRD	Sustained Response District
SSF	Suraj Social Franchise
STI	Sexually transmitted infection
TA	Technical assistance
TB	Tuberculosis
TBD	To be determined
TNA	Training needs assessment
TOT	Training of trainers
TT	Tetanus toxoid
TWG	Technical working group
UHC	Universal health coverage
UI	University of Indonesia
UI-CFW	Universitas Indonesia (UI) – Center for Family Welfare
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNAN	Universidad Nacional Autónoma de Nicaragua (National Autonomous University of Nicaragua)
UNCoLSC	United Nations Commission on Life Saving Commodities
UNICEF	The United Nations Children's Fund
UPOLI	Universidad Politécnica de Nicaragua (Polytechnic University of Nicaragua)
URC	University Research Co., LLC
USAID	United States Agency for International Development
USG	United States Government
VHT	Village Health Team

VL	Viral load
VMMC	Voluntary medical male circumcision
VSLA	Village savings and loan associations
WASH	Water and sanitation and hygiene
WHO	World Health Organization
WIT	Work improvement team
YCC	Young Child Clinic

EXECUTIVE SUMMARY

University Research Co., LLC (URC) and its partners have completed the fourth year of implementation of the USAID Applying Science to Strengthen and Improve Systems (ASSIST) Project. This report is the eighth Semi-Annual Performance Monitoring Report for the project and aims to summarize the accomplishments and results toward the program objectives of USAID ASSIST activities during quarter (Q) 1 through 4 of Fiscal Year 2016 (FY16).

The overall objective of the USAID ASSIST Project is to foster improvements in a range of health care processes through the application of modern improvement methods by host country providers and managers in USAID-assisted countries. The project's central purpose is to build the capacity of host country systems to improve the effectiveness, efficiency, client-centeredness, safety, accessibility, and equity of the services they provide. In addition to supporting the implementation of improvement strategies, the project seeks to generate new knowledge to increase the effectiveness and efficiency of applying improvement methods in low- and middle-income countries.

USAID ASSIST country programs are in alignment with the goals of United States Government and global initiatives, including Ending Preventable Maternal and Child Deaths and Achieving an AIDS-Free Generation. Aligning with these priorities and policies ensures that considerations for marginalized and underserved populations and gender, age, and social differences are taken into account at all levels of implementation.

During FY16, USAID ASSIST provided assistance in 28 countries through field and core funding. Work in 19 countries was funded through field support: Botswana, Burundi, Cambodia, Cote d'Ivoire, Democratic Republic of Congo (DRC), India, Indonesia, Kenya, Lesotho, Malawi, Mali, Namibia, Nicaragua, Pakistan, South Africa, Swaziland, Tanzania, Uganda, and Zambia. Activities in 15 countries were supported through core funds. Funds for Neglected Tropical Diseases supported new improvement work in the Dominican Republic, El Salvador, Guatemala, and Honduras to combat the Zika virus, with additional funding received at the end of the year to support more limited Zika assistance in Ecuador, Nicaragua, Paraguay, and Peru in FY17. Funds from the USAID Office of HIV/AIDS supported activities in: 1) HIV and AIDS activities in Mozambique, South Africa, Swaziland, and Uganda; 2) health workforce studies in Swaziland, South Africa, Mozambique, and Lesotho; and 3) improving patient engagement, adherence, and retention using the nutrition assessment, counseling, and support (NACS) platform in Kenya, Tanzania, and Uganda. The project also provided technical assistance in nutritional quality improvement in South Africa, Mozambique, Botswana, and Lesotho with field support from the Southern Africa Region and began planning an infection control collaborative in Palestine with funds from the Middle East Bureau. USAID cross-bureau-funded activities, through the Office of Health Systems, supported malaria prevention activities in Malawi; demonstrations of people-centered care in Mali and South Africa; pre-service training in improvement methods in Kenya; as well several global and regional initiatives that contribute to local and global learning in improvement.

To support the project's learning agenda, ASSIST provided technical assistance in knowledge management (KM) to field teams in Botswana, Kenya, Tanzania, to strengthen staff capacity in KM and assist technical teams to incorporate KM approaches in their work. In addition, in-person training and technical support were provided to country teams in Uganda, Botswana, and DRC to integrate gender considerations into their improvement work. Ongoing gender support was provided to field offices to collect and analyze sex-disaggregated and gender-sensitive indicators, identify gender-related gaps and issues affecting outcomes, and respond to those gaps. The ASSIST knowledge portal continues to show high usage. A PHFS Learning Platform was launched on the portal, and new video content was developed.

The project's research and evaluation (R&E) activities are being designed to help show country programs how and why investment in improvement adds value to health care delivery. Another aspect of the R&E agenda is to build up the body of evidence of what works and what does not in terms of improvement methods. In FY16, the R&E team supported country-led research programs in 15 countries (Burundi, Cote d'Ivoire, DRC, Ecuador, Honduras, India, Kenya, Lesotho, Malawi, Mali, South Africa, Swaziland, Tanzania, Uganda, and Ukraine). In addition, the team supported a multi-country studies on: experiences from the Partnerships in Community Child Protection in Africa and a

multi-country study in Latin America; evaluating a web-based improvement collaborative to prevent neonatal infections in hospitals; supporting community providers through a community health system approach in Ethiopia and Tanzania; and a survey of improvement methods inclusion in the curricula of medical schools. The R&E team also provided technical assistance to Botswana, Burundi, DRC, and Lesotho on validation of their improvement indicators. In this fiscal year, data collection from control groups was planned or conducted in Burundi, DRC, Kenya, Tanzania, and Uganda.

Major global technical leadership activities included: convening the Salzburg Global Seminar which brought together improvement science and implementation research experts to recommend ways to improve the validity, attribution, and generalizability of learning from improvement; launching the first eLearning course on health care improvement on the USAID Global eLearning Center; and leading the global learning agenda for the Partnership for HIV-Free Survival. ASSIST also demonstrated important leadership in the area of applying quality improvement methods to maternal, newborn, and child health and to biomedical prevention of HIV through voluntary medical male circumcision, collaborating on tools to enable health professionals to apply improvement methods and building capacity of USG, Ministry, and implementing partner staff in quality assurance and quality improvement.

FY16 Results:

- **Publications:** In FY16, project staff published seven peer-reviewed articles; 13 case studies; 23 technical and research reports; nine short reports; 13 guides and job aids; and five videos describing project-supported work and results.
- **Presentations:** ASSIST had an active presence at 17 international conferences. In all, project staff led 18 sessions and workshops and made 20 oral presentations at these conferences, sharing results and insights from applying modern improvement approaches.
- **Research and evaluation studies:** At the end of FY16, the project had 39 studies underway in 15 countries. Four are multi-country studies.
- **Improvement in key indicators:** As discussed in this report, ASSIST-supported programs demonstrated improved care and outcomes for a range of services, including antenatal and postnatal care, essential obstetric and newborn care, family planning, PMTCT, HIV care and treatment, HIV prevention, TB-HIV case management, malaria diagnosis and case management, and services for vulnerable children and families.

Challenges: While the work under ASSIST is proceeding, there remain serious funding issues, in particular the discrepancy between the timing of the funding and the work planning requirements. From years 1 through 3, ASSIST received \$85,837,002 in obligations. For year 4 (FY16) only, ASSIST has received \$59,156,500 in funding; for year 5 (FY17) ASSIST is expecting an additional \$9 million for Zika and \$49,465,000 for other Core and Mission-funded work. ASSIST will require an extension to complete all agreed upon work plan activities. The timing of the approval for extension could have severe consequences on staffing.

Remedies: The expedition of the approval for an extension for the ASSIST cooperative agreement would remedy the above obstacles, as well as the formal communication of this approval of extension to Bureaus and Missions. Delays in the approval of an extension will damage the technical progress of work and undermine working relationship with Ministries, partners in country, and project staff.

Field Support-Funded Activities

AFRICA

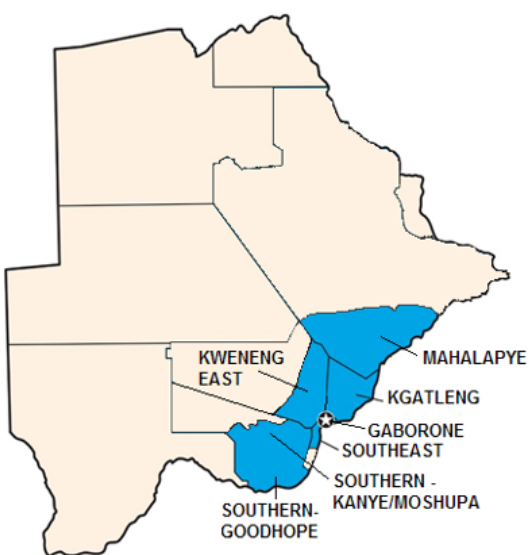
BOTSWANA

BACKGROUND

ASSIST has been providing support to the Botswana Ministry of Health (MOH) since 2012. Following an initial focus on the operationalization of quality improvement strategies for the national Maternal Mortality Reduction Initiative, ASSIST shifted its focus in FY16 to HIV/AIDS and the PEPFAR Botswana strategy to achieve epidemic control. Engaging with different levels of the Botswana health system, the project now applies improvement approaches to address quality and service gaps along the HIV care and treatment cascade, and supports the scale up of community-based provision of services under the USAID *Advancing Partners and Communities* (APC) project. Integrated in this approach is ASSIST's support to Botswana's strategy of expanding treatment under *Test All*, with a focus on ensuring quality of care as a key factor in strengthening retention and long-term adherence to treatment.

At the community level, ASSIST is working through existing formal governance structures and informal groups and networks to systematically strengthen community/facility collaboration; improve the quality, effectiveness, and reach of HIV-related services; and generate evidence for the targeted innovation and adaptation of patient-centred delivery models under Primary Health Care. ASSIST's support to community improvement teams (CITs) is actively linked with the coordination role of District Health Management Teams to institutionalize simplified and refined processes for improved linkage, retention, and adherence. ASSIST's improvement aims in Botswana reflect a direct contribution to the 90-90-90 control targets in seven highly affected HIV priority districts: to strengthen linkage to care for people who test positive; to address gaps in tracking and retaining patients; to improve bidirectional communications and effective referral practices; and to facilitate the systematic provision of patient-oriented services at community level.

Scale of USAID ASSIST's Work in Botswana



Coordinated PEPFAR Botswana efforts to achieve epidemic control started in October 2015



MOH, MLGRD at national and district level; District and Tribal Administration; other IPs under PEPFAR-B



7 PEPFAR priority districts with high-burden of ART and HIV



40+ facilities with highest volume of ART (no direct TA) and associated referral sites



2-5 communities for each of the high-volume facilities



32 community-based QI teams as of 30 Sept 2016; 40-50 expected in total



Direct and indirect beneficiaries: majority of Botswana's HIV population through improved delivery systems

PROGRAM OVERVIEW

What are we trying to accomplish?	At what scale?
1. Strengthen the community health system response to HIV/AIDS to contribute to HIV epidemic control in Botswana	
<ul style="list-style-type: none"> Contribute to epidemic control of HIV in Botswana through the targeted application of quality improvement methods to improve linkage, retention and adherence to HIV care for people living with HIV 	<ul style="list-style-type: none"> Communities in PEPFAR's 7 priority districts in Botswana ASSIST will facilitate dedicated improvement teams at community level (between around 30-50); work with district level mechanisms to institutionalize QI practices; and support the development and implementation of new models of patient-centered, community-oriented integrated models of differentiated care

Improvement Activity

Activity 1. Strengthen the Community Health System Response to HIV/AIDS

OVERVIEW

ASSIST began working closely with and through existing traditional governance and decentralized administration structures starting in October 2015. At the invitation of traditional leaders, the ASSIST team supported the formation of dedicated CITs. These CITs brought together community volunteers from existing formal and informal community groups, committees, and networks to represent the community at large. Facilitated by ASSIST, these teams met twice a month to explore potential change ideas to revitalize the involvement of their community in key questions around the delivery of essential health services – specifically to improve the quality and patient-centeredness of HIV-related services in the community, on the basis of in-depth problem analyses. These CITs provide opportunities for improved community level patient-centered health services and processes. Oriented and guided by ASSIST in the application of simple but targeted QI methods, CITs explored to: 1) improve communication with and across facilities and other service providers to address existing quality and service gaps in the community; 2) adapt and improve 'systematic' access to quality HIV and other health services; 3) facilitate innovative approaches for community/facility collaboration; and 4) support the scale up of services provided by community-based organizations directly at community and household levels (through, among others, the USAID APC project).

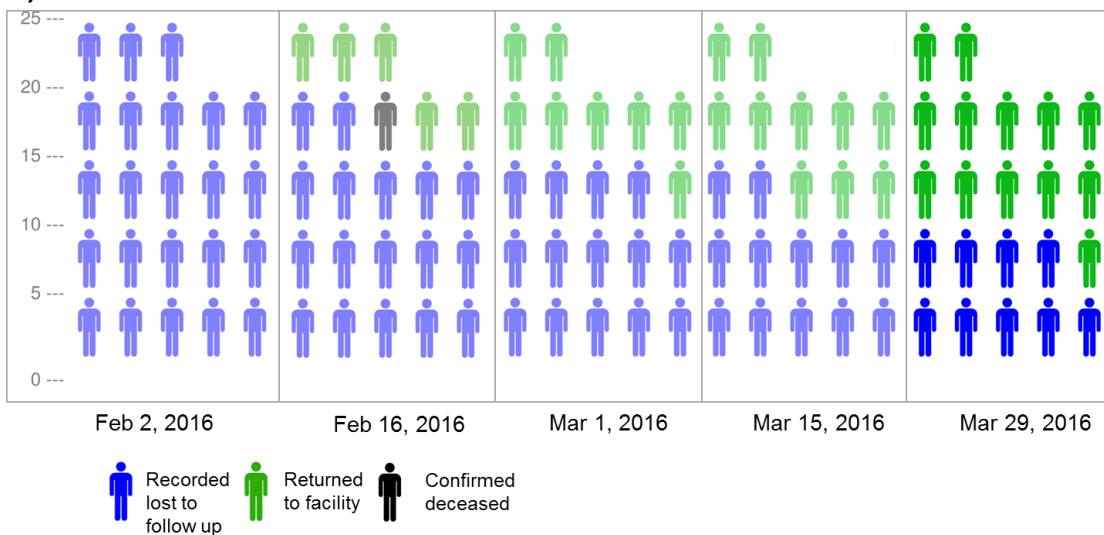
KEY ACCOMPLISHMENTS AND RESULTS

- Developed a shared understanding of the role of ASSIST, and of community-based QI more broadly, in support of epidemic control** (Oct – Dec 2016). Worked with PEPFAR Botswana and implementers on both the community and facility sides; MOH, National AIDS Coordinating Authority, and district officials in project districts; traditional leaders and local committee representatives; and operational partners to ensure shared expectations and understanding of ASSIST and community-based QI. This time invested in clarifying project roles and exploring the best 'contextual fit' at community level provided a strong foundation which made it easier to orient communities and form CITs.
- Formed and supported 32 community improvement teams** (Oct 2015 – Sept 2016). As a result of dialogue with district, tribal, and other local leaders, ASSIST was invited to work with existing committees and platforms to form improvement teams and support the development and testing of local change ideas. ASSIST provided broad orientations to a wide range of existing community groups and committees, representing a microcosm of the community. This process was agreed upon and welcomed by local chiefs and village development committees. During orientations, ASSIST introduced the basic underlying ideas of improvement work, emphasizing local ownership and the need for the community to be involved in collaborative problem solving. At the invitation of local chiefs, the ASSIST team advanced from consulting and orienting community groups to forming dedicated CITs. CITs, with the support of ASSIST staff, then analyzed service gaps and obstacles and prioritized potential CIT actions along localized

improvement aims. Following their formation, orientation and focused problem analysis, CITs received regular hands-on coaching on a bimonthly schedule in breaking down and prioritizing problems; exploring change ideas that might have the potential to address prioritized problems; and preparing full Plan-Do-Study-Act (or PDSA) cycles. Given that teams were formed by community leaders at different dates across districts, the pool of 32 operational CITs at the end of FY16 includes advanced teams; teams that are in their initial learning curve; and others only recently formed.

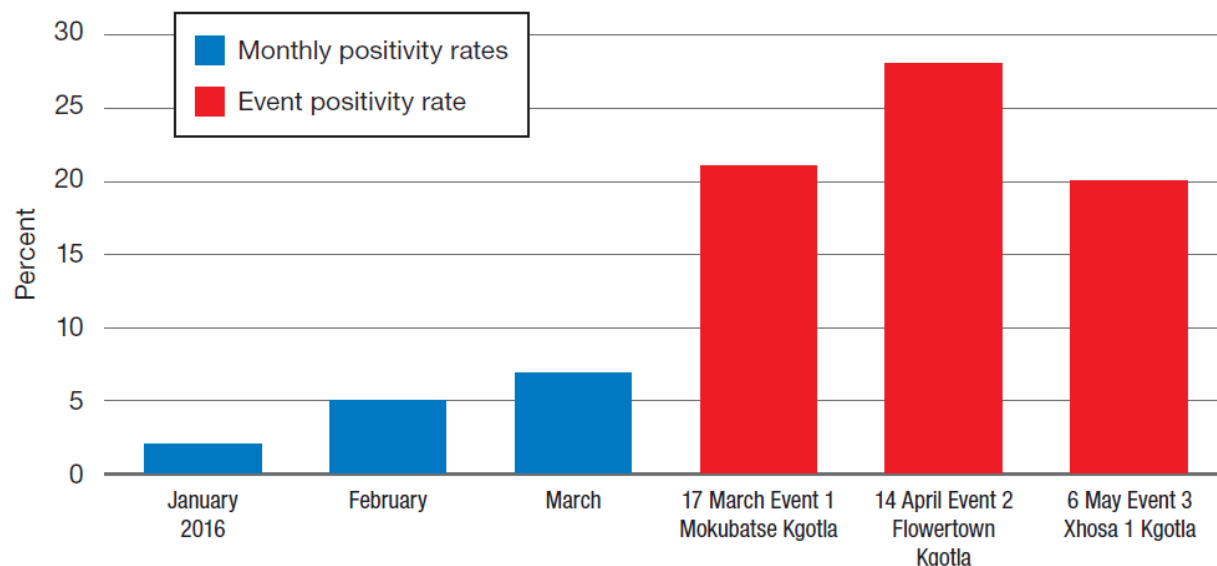
- Improved identification and return to care of lost-to-follow-up (LTFU) patients at Palla Road Village (Feb – March 2016).** At Palla Road Village in Mahalapye Sub-District, after initial delays of establishing meaningful baselines in the context of poor and outdated data, the CIT decided to first focus on reducing the number of patients LTFU. **Figure 1** shows cumulative efforts by the CIT with the local government health post to find and reconnect with LTFU patients, respecting LTFU’s confidentiality and concerns over disclosure and addressing these appropriately. With the help of two combined change ideas built on local knowledge and the power of community networks, the CIT assisted the facility in the effective clarification of status, and the return of 13/22 LTFU patients within a short period. This experience demonstrates a simple and easy to replicate innovation in how facilities can more actively benefit from community engagement and resources. In the follow up to this focused change idea, facility staff even reported to have intensified their efforts to improve follow-up to other non-HIV chronic care patients.

Figure 1. Botswana: Reducing the number of patients lost to follow-up, Palla Road (Feb – Mar 2016)



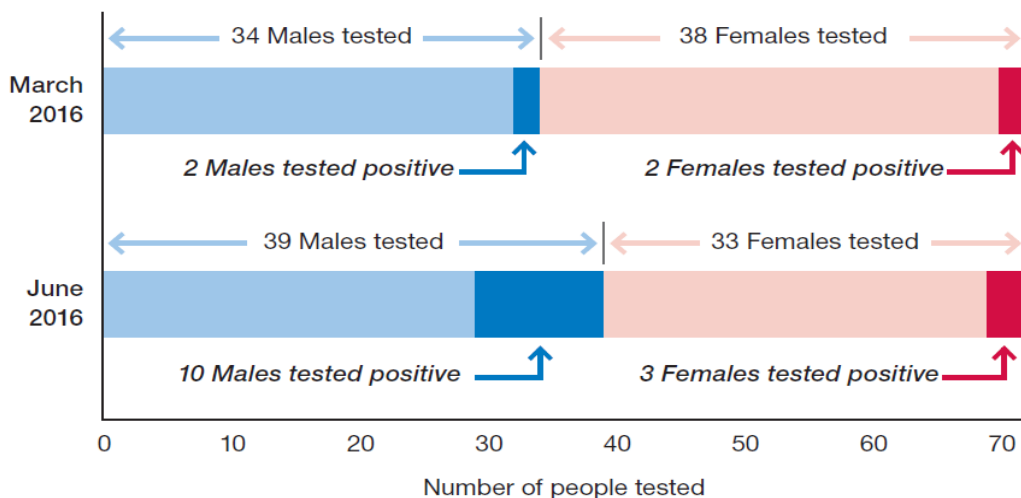
- Increased HIV testing and counseling in Mahalapye (Jan – June 2016).** **Figure 2** represents the implementation of targeted community involvement to improve yield and targeting of HIV testing. The CIT deliberately focused on the mobilization of hard-to-reach, at-risk, and other possibly underserved population groups. Following targeted messaging during formal community meetings at the Kgotla (the traditional assembly forum), the CIT asked a NGO to provide HIV testing at three consecutive events at the community hall – a venue that further underlines their messaging focus on both individual responsibility and collective welfare of the village. In addition to increased testing numbers, a closer analysis of the testing results and numbers revealed a much higher “yield”, as reflected in the positivity rates (established in collaboration with the providers).

Figure 2. Botswana: Improving the targeting and yield of HIV testing, Mahalapye (Jan – May 2016)



- Improved identification of HIV positive males in Gaborone (March – June 2016).** In Gaborone, a CIT explored another important dimension for community-directed approaches to HIV testing. Men, in particularly those with high-risk behaviors, are known to be difficult to mobilize and get tested. This has to do with the broader gendered nature of cultural norms where men typically only seek health care when they are faced with acute problems. In the case of the CIT change idea in Gaborone Urban, the team collaborated with one of the local service providers, the Botswana Christian AIDS Intervention Program (BOCAIP). BOCAIP is also a sub-supplementer under the APC project. After a detailed problem analysis, all decided that CIT members would join community mobilizers from the service provider on home visits in the Bontleng locality within Gaborone Urban ward. In a similar testing drive just two months before, BOCAIP found that many of the households they approached were not receptive and declined the offered immediate home testing; in addition, some people complained to the local chief that the testing drive approach was inappropriate. When the ASSIST CIT partnered with the provider in June 2016 on another testing drive, this feedback was taken into account and the community response was markedly different (see
- for specific changes). While overall testing numbers for the ASSIST-supported testing drive (offered during two mornings on a weekend) was the same as the previous drive (at 72 tests) and with only a slight increase in the share of men, the number of men who tested positive increased significantly from two to ten. What this seemed to indicate, and has been tentatively confirmed through ex-post data checks and conversations with the mobilizers, is that men who would otherwise have declined or refused testing were now willing to come forward and get tested.

Figure 3. Botswana: Reaching at-risk males for HIV testing, Gaborone, March 2016 (Event 1) and June 2016 (Event 2)



- **Supported scaling up community- and home-based delivery of HIV and related health services through PEPFAR partners** (Jan – Sept 2016). In addition to the immediate support provided by ASSIST in select communities across Botswana, ASSIST was closely involved in efforts at district and national levels to address gaps and issues in the functioning of existing service delivery models, and the development of new approaches to bring quality services closer to communities. The project also supported the immediate scale up of services through other PEPFAR partners, including by providing direct assistance to a key community service provider under the USAID-APC project.
- **Conducted a Learning Session in Mahalapye and connected community improvement with district system management** (Aug 2016). In Mahalapye Sub-District, six CITs supported by ASSIST were brought together with district actors and national stakeholders to present their work as a basis for shared learning and to prepare the ground for the eventual institutionalization of both the specific innovations and broader QI practices in the district administration and management of the health system.
 - The Mahalapye community improvement learning session (Aug 2-3, 2016) concluded with strong words of appreciation and declarations by senior district officials to take advantage of revitalized community structures; of organized volunteerism under traditional leadership; and of a methodology that focused this volunteerism on the quality of services and the improvement of collaboration with formal system structures. In this context, the District Health Management Team (DHMT) reiterated its interest in a strategic partnership with ASSIST to review and improve delivery mechanisms for HIV services and their coordination at the district level to ensure the effective linkage and communication with community platforms. Furthermore, representatives from the national Ministry of Health welcomed community-based QI as an approach inherently in line with government objectives to revitalize community-driven primary health care, and with ‘bottom-up’ community development as promoted by the Ministry of Local Government and Rural Development.
- **Shifted the discussion from the ‘what’ to the ‘how’ of service delivery** (Aug – Sept 2016). Informed by work at the community level, ASSIST’s engagement with national-level Government and partners allowed us to inform the discussion on the practical potential and sustainability of community approaches; on community demands for ‘quality’ service delivery (not only quality service); and for integrated services beyond just HIV. Following the 2016 International AIDS Conference in Durban, ASSIST worked actively to shift the Botswana HIV discourse further from a predominant focus on treatment expansion under Treat All (the WHAT) to the actual modalities of delivering quality care (the HOW), including by providing Government and partners with analysis on existing guidelines, SOPs and other documents from neighboring countries that are already operationalizing differentiated care approaches. Together with partners at the USAID

Mission and the APC project, ASSIST continues to offer support to the MOH to adapt these concepts to Botswana's epidemiological, social and health system context: How can HIV and related health services be better delivered to those who need them – at different levels, in different settings and to different subpopulations? How can patient and community demands for more integrated chronic care support be delivered under Government's prioritized primary health care approach?

- **Preliminary cost analysis for community-based QI** (July 2016-present). The team conducted a preliminary cost analysis with the support from an HSPH Improvement Fellow who joined the Botswana team. Results will be finalized in FY17.

GENDER INTEGRATION

The collection, review, and improvement of data from across different relevant sources to support community-driven QI work in Botswana has been identified both as a key objective and requirement for the project from the start. Without any direct role in the provision of services, or direct access to clinical facilities, the project is itself not generating any original service data on its own. That said, the project's effective support to community, district and national partners depends to a large degree on access to and quality of data as generated and collected by others. From project start in October, many interactions with partners have highlighted the need for open sharing arrangements and openness about the quality of care, as well as a shared concern and responsibility to improve the quality of data. The quality of data also involves access to disaggregated data, ideally by sex and age, as well as the use of gender-sensitive indicators.

The extensive degree to which gender, cultural and social norms, as well as broader economic and health inequities play important roles in the Botswana HIV epidemic, are well documented by a rich body of academic and other literature. More efforts are needed, however, to measure and interpret locally generated data to inform effective work in public health and HIV. ASSIST is integrating existing knowledge on inequity and gender disparities in its training and internal discussions to support the work of communities in making HIV and broader health services more patient-centered, accessible, effective and equitable. In the light of this challenge, Botswana ASSIST has significantly increased its staff dedicated to generate better data and information exchanges with facilities, partners and communities.

In May 2016, Ms. Julia Holtemeyer of WI-HER, LLC provided onsite training and technical support in gender integration. She facilitated staff discussions around gender issues in Botswana ASSIST community HIV work, including gender-based violence, gendered caregiving burden, gendered fear of disclosure, gendered stigma and discrimination, confidentiality of the health system, and QI team composition. These important discussions led to staff thinking critically and explicitly about gender issues affecting their work. This led to changing the Botswana ASSIST coaching guides to include gender considerations, including asking QI teams about sex-disaggregated data and how gender may impact whatever aim they are working on. Additional efforts in this area will be focused on informing the development of new service delivery models that differentiate care packages to specific key subpopulations, including under gender considerations.

SUSTAINABILITY AND INSTITUTIONALIZATION

ASSIST worked closely with USAID and partners to consult with relevant existing health and development structures, including central Ministries of Health, Local Government and Rural Development, as well as the National AIDS Coordinating Authority. As part of this dialogue, PEPFAR implementers on the community side worked hard to align with Government-developed community approaches under CATCH (*Communities acting together to control HIV*). This alignment was not only a response to the government's sensitivity and appreciation of due process by external partners; it was also important in the context of Botswana's evolving decentralization where service delivery responsibilities are increasingly delegated to lower levels with important coordination and oversight responsibilities kept at the central level.

In addition, and of particular importance to the idea of institutionalizing improvement approaches in Botswana, the project undertook substantial efforts to engage with local government stakeholders. At the request of District AIDS coordinators and DHMTs, ASSIST prioritized an active role in supporting district mechanisms in partner coordination, also to ensure that its own role of community-based

improvement is fully appreciated and understood in the direct context of related efforts to improve care, both through community organizations and in facilities.

Local governance and administrative structures in Botswana have been firmly established since Independence, alongside traditional ones under the *Dikgosi system*. As a consequence, ASSIST's focus on collaborative processes at the community level was designed for 'best fit' within existing structures in order to promote long term sustainability. The formation of community improvement teams at the invitation of traditional chiefs and community leaders provided an opportunity to the project to link and embed them in the context of a wide range of existing groups and committee structures. ASSIST's emphasis on institutionalization and sustainability was immediately welcomed and underlined by community leaders, recommending close links and overlapping memberships with other existing committees. This configuration is seen as an important foundation and a necessary (if not sufficient) condition for generating sustainable local ownership.

ASSIST continues to coordinate its activities closely with all relevant partners within PEPFAR Botswana and its many implementers – but more importantly: with relevant Government counterparts and structures at national, district, and local level. This involved at the central level the Ministry of Health (following the integration of the previously independent National AIDS Coordinating Authority), and the Ministry of Local Government and Rural Development. At the district level, ASSIST went out of its way to continuously inform and consult with DHMTs and District AIDS Coordinators working with the District Multisectoral AIDS Committees. District Health Management Teams in particular are responsible for ensuring service delivery by both government and non-governmental providers, and thus in a position to institutionalize QI-generated process and delivery innovations across the district. Achieving an effective institutionalization and long term sustainability of active community involvement is directly linked and aligned with the government's declared emphasis on primary health care and its interest in revitalizing community health structures. ASSIST is working across all system levels to help connect these different angles under a joint approach that links community-driven improvement with district coordination and national policy objectives for better outcomes and equity in HIV and broader health outcomes.

Increasingly, and in particular following the ASSIST district learning sessions and presentations of the project at district-level meetings, district offices and mechanisms across all seven sub-districts have been requesting support from the project. The close involvement of district level actors is part of ASSIST's strategy to ensure the long term institutionalization of quality improvement methods at all levels, and the sustainability of the quality and system improvement gains made during ASSIST's mandate in FY16-17.

BURUNDI

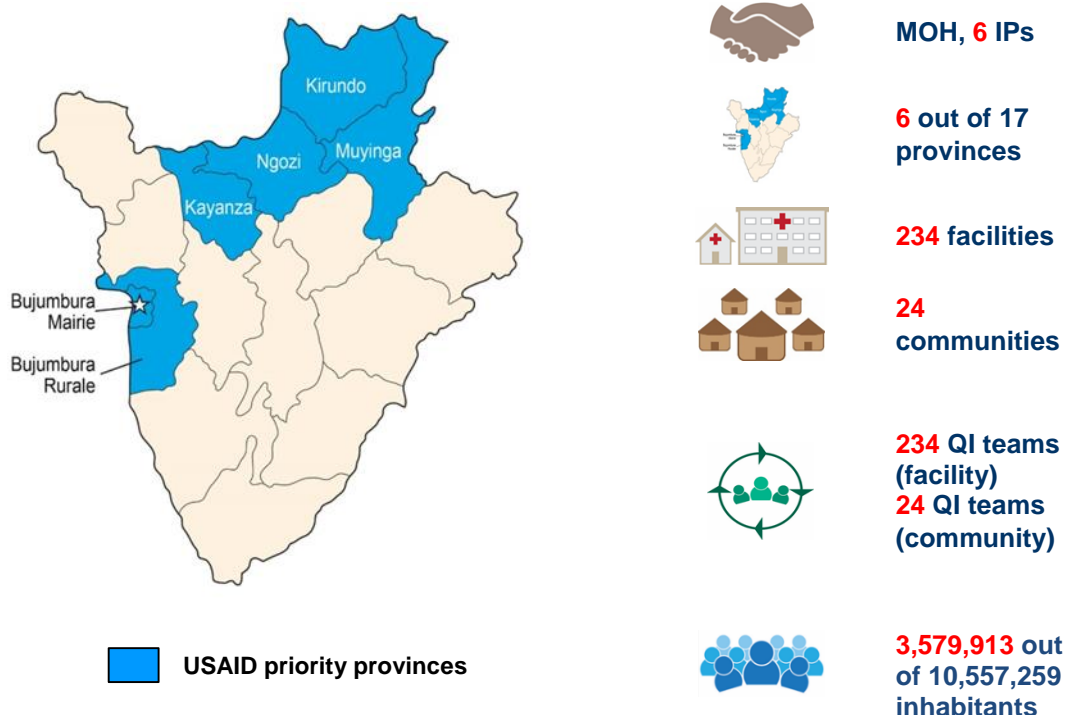
BACKGROUND

With funding support from PEPFAR, the USAID ASSIST Project began work in Burundi in January 2013, building on a prevention of mother-to-child transmission of HIV (PMTCT) service delivery assessment and human performance technology assessment conducted in 2012 under the USAID Health Care Improvement Project (HCI). ASSIST is supporting the Ministry of Health (MOH), in collaboration with other PEPFAR implementing partners (IPs) to improve the uptake and quality of PMTCT services for mothers, their partners, and their infants, and to improve retention of mothers and infants along the PMTCT cascade. In addition, ASSIST is working in close collaboration with FHI 360, Pathfinder International, Management Sciences for Health, MEASURE Evaluation, Engender Health, and local non-governmental organizations (NGOs) to address these health care gaps.

In FY16, based on the changes to the PEPFAR operational planning (which prioritizes high-burden geographic areas and key populations and targets support to areas of maximum potential impact for achieving epidemic control), ASSIST is working with the MOH at all levels to support improvement work at sites in five USAID priority provinces (Kirundo, Kayanza, Ngozi, Bujumbura Rural and Mairie de Bujumbura) and transitioned out of facilities QI support in three provinces (Muyinga, Karusi and Gitega) by March 2016. ASSIST continues to support a community health intervention in Giteranyi District of Muyinga Province, to spread tested changes to other sub-collines in Giteranyi Health District and in another province.

ASSIST is also building the MOH capacity to support these efforts, apply the approach to their strategies and plans, and link all synergistic components so that strategies and operations come together for better care. The National Program for the Fight against AIDS and Sexually Transmitted Infections (PNLS) has set up a coordination committee that will implement the operational plan of the health sector in HIV/AIDS. As part of the strategy of institutionalization and sustainability of the project, ASSIST is working closely with PNLS to conduct capacity building of the members of this committee in QI methods. The project is also supporting the PNLS to develop evaluation and monitoring tools of the quality of PMTCT services in order to allow the program to ensure good coordination of PMTCT activities.

Scale of USAID ASSIST's Work in Burundi



PROGRAM OVERVIEW

What are we trying to accomplish?	At what scale?
1. Implement a PMTCT improvement intervention in five provinces	
<ul style="list-style-type: none"> • Improve uptake of PMTCT services (by mothers, infants, and partners) • Improve retention of mothers and infants along the PMTCT cascade • Improve quality of PMTCT services 	<ul style="list-style-type: none"> • Provinces: 6 out of 17 provinces (Bujumbura, Bujumbura Rural, Ngozi, Kayanza, Kirundo, Gitega, Karusi, Muyinga) • Phase I close-out sites: all sites (145 sites) in the 3 provinces (Muyinga, Karusi and Gitega) • Phase II sites: TBD sites in 5 provinces (Bujumbura, Bujumbura Rural, Ngozi, Kayanza, Kirundo) • Districts: 16 out of 16 health districts in the 5 phase II provinces (16 out of 46 districts in the country) • Facilities in selected districts: 100% (234 out of 234 PMTCT sites in the 16 health districts) • QI teams: 234 facility teams • Catchment population facilities/communities served: 3,456,165 out of 10,557,259 inhabitants

<ul style="list-style-type: none"> Strengthen community system to improve the performance of CHWs to provide quality of PMTCT services at the community level 	<ul style="list-style-type: none"> Communities: 24 sub-collines surrounding 6 out of 15; and peripheral facilities in Giteranyi District QI teams: 24 community teams Catchment population communities served in the target health district: 123,748 out of 292,967 inhabitants
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Improvement Activity

Activity 1. Implement a PMTCT improvement intervention in five provinces

OVERVIEW

Although the current MOH National Health Development Plan (PNDS II) has explicitly highlighted quality needs, it lacks a continuous and structured approach to improvement. ASSIST is introducing a modern QI approach and improvement science, both technically and operationally, at all levels of the health care system. In addition to facility-level work, ASSIST is also supporting the MOH to address human resources management as an integral part of the clinical improvement work, to enhance providers' productivity, motivation, and performance. ASSIST is working closely with the PNLS' coordination committee to build the capacity of committee members in QI methods. The project is also supporting the PNLS to develop evaluation and monitoring tools to evaluate the quality and coordination of PMTCT services.

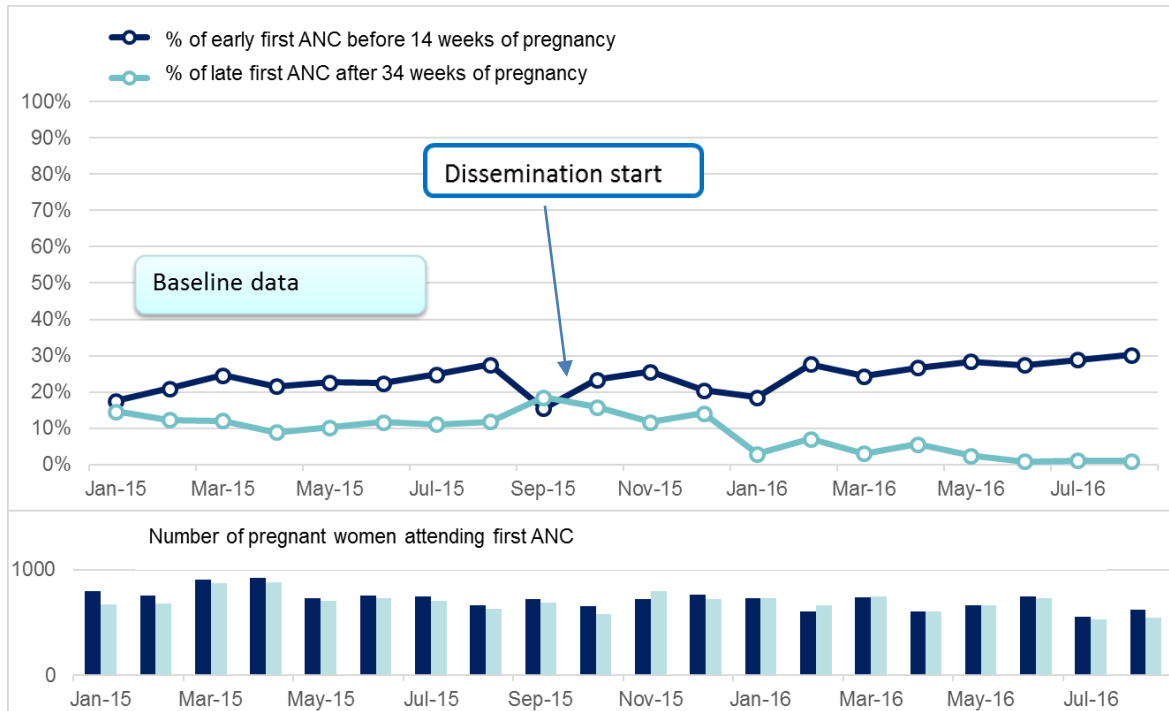
KEY ACCOMPLISHMENTS AND RESULTS

- Conducted monthly site coaching visits in all provinces (Q1-Q4).**
 In Q1 and Q2, ASSIST provided technical support to district and provincial coaches' monthly coaching visits. District coaches conducted coaching visits in all sites on monthly basis while coaching visits in mixed teams (district coaches and PNLS or ASSIST technical staff) were conducted in six provinces Kirundo, Kayanza, Gitega, Ngozi, Karusi and Bujumbura Mairie. Coaching visits to other sites mainly focused on checking the quality of data previously submitted as well as analyzing improvement result they got since last coaching visit. The purpose of these coaching visits in dissemination sites was focused on the use of the change package as well as data collection in order to implement the package of change.
 In Q3 and Q4, ASSIST provided technical support to district and provincial coaches' monthly coaching visits. District coaches conducted coaching visits in all sites on a monthly basis while coaching visits in mixed teams (district coaches and PNLS or ASSIST technical staff) were conducted in four provinces: Bujumbura Urban (May 2016), Ngozi (June 2016), Kirundo (June 2016) and Kayanza (June 2016). The purpose of the coaching visits in scale-up sites was focused on implementing the change package as well as data collection. Coaching visits to other sites mainly focused on checking the quality of data previously submitted, as well as analyzing the improvement results obtained since the last coaching visit. During the coaching visits, coaches discussed with QI team members the new national PMTCT guidelines to keep members up to date. Visits also provided an opportunity to follow-up on the implementation of the recommendations formulated during previous data quality review meetings.
- The USAID mission conducted a SIMS visit.** (Oct 29, 2015 and June 30, 2016). Before starting the SIMS visit, Kirundo Health Provincial Director, Dr. Nzorironkankuze presented to USAID how they are integrating QI activities into provincial and district work plans, and the process followed to disseminate best practices learned from the pilot phase.
- In Q3, the USAID Mission conducted another SIMS visit in one site supported by ASSIST --** Gwegura Health center located in Kayanza Health District, Kayanza Province. The purpose of this visit was to deliver a rapid assessment of the quality of HIV services provided by the facility and to identify the areas that needed to be improved. Each USAID implementing partner was requested to put in place a work plan to address the gaps identified. The USAID team congratulated the Gwegura QI Team where performance exceeded expectations.

- **Conducted data quality review meetings:** In close collaboration with all levels of the MOH, ASSIST conducted data quality review meetings in Ngozi (April 4-5, 2016), Bujumbura Mairie (May 3-4, 2016) and Bujumbura rural (May 5-6, 2016). The purpose of these meetings was to share the results obtained from the implementation/dissemination of the change package from phase 1. Each site presented the data they have collected and the changes implemented for each improvement aim and indicator before and after QI activities. At the end of the meeting, each health district developed recommendations and a plan in the form of a dashboard to address the weaknesses identified.
- **Conducted a provincial orientation session in all provinces to disseminate the initial change package of phase 2 and select pilot sites for phase 2** (May, Sept 2016). In collaboration with the MOH at all levels, ASSIST conducted a two-day orientation meeting in the five provinces: Kirundo (May 24-25, 2016), Kayanza (May 31 – June1, 2016), Ngozi (June 14-15, 2016), Bujumbura Mairie (June16-17, 2016) and Bujumbura Rural (June 27-28, 2016). The meeting primarily targeted the health managers at the provincial and district levels as well as the leaders of the health facilities. The aim of the meeting was to discuss and disseminate the technical content of the phase 2 change package which will focus on adherence to ARVs and retention on care and treatment. The anticipated result was to have a common understanding of aims and indicators as well as data collection tools. In addition, during the meeting, the participants selected the high-volume sites for each health district, which will be testing change ideas to improve adherence to ARVs and retention in care and treatment.
In Q4, ASSIST conducted provincial meetings on change package dissemination in Bujumbura Rural (Aug 9 -10, 2016), Ngozi (Aug 16 - 17, 2016), Kirundo (Aug 25 - 26, 2016), Kayanza (Aug 30 - 31, 2016) and Bujumbura Mairie (Sept 15-16, 2016). The purpose of these meetings was to share the results obtained from the implementation/dissemination of the change package from phase 1. Each site presented the data they have collected and the changes already implemented for each improvement aim and indicator. Improvement was noted by measuring data for each indicator before and after QI activities. During these meetings, coaches from PNLS/IST explained the PMTCT key indicators that will be collected every month in national data record system. At the end of the meeting, each health district developed recommendations and dashboards to address the weaknesses identified.
- **Conducted coaching visits of the community QI teams in the pilot project in Giteranyi Health district** (June-Sept 2016). Monthly coaching visits was conducted with all the 24 community QI teams. The coaching visits focused on screening the tested changes to see which ones resulted in an improvement, and to select the changes which will be part of the community change package. ASSIST staff in Burundi, with the technical assistance of the regional office and in close collaboration with the MOH through the HIV/AIDS National Program, started to collect community best practices which will be used to develop a community change package from pilot project in Giteranyi Health District. The change package will be validated by national experts before spreading into other community sites.
- **Conducted validation and control study** (Sept 2016 - present), ASSIST in Burundi, with the technical assistance of HQ and the Regional Office, conducted a study of validation and control. The results of the study will show the added value of ASSIST as well as the reliability of the data collected within the framework of the project. During Q4, the project developed the study protocol, the data collection tools, and conducted data collection in the field.
- **Results: Figure 4** shows increased percentages of pregnant women coming for early first ANC visits and decreased percentages of pregnant women attending first ANC later in 15 scale up sites in Kabezi Health District from January 2015 to August 2016. Changes introduced were:
 1. Announcement made in the church that any pregnant woman who attends 1st ANC visit before 14 weeks will receive an item or service as an incentive such as soap, free test of pregnancy, free test of glycemia.
 2. Increase in number of health education sessions in health facility per week on advantages of early ANC.

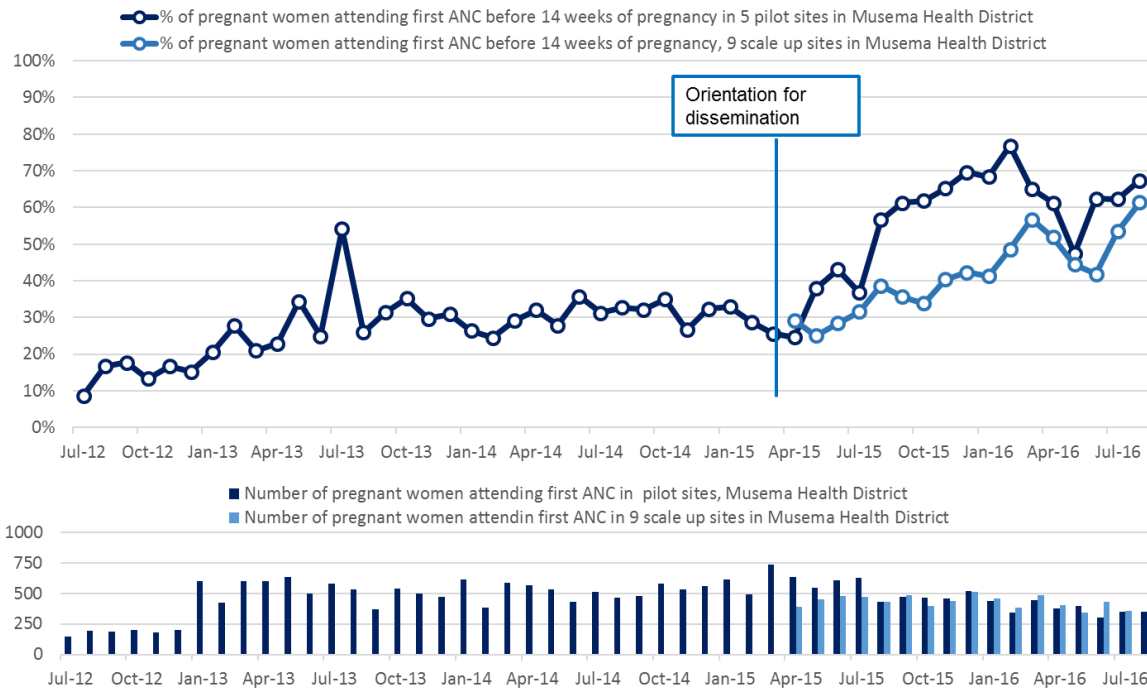
- Community health workers (CHWs) and other community leaders sensitize the community on advantages of early ANC and the importance of HIV counseling and testing for pregnant women during the first quarter of pregnancy

Figure 4: Burundi: Percentage of early first ANC visits, 15 scale-up sites, Kabezi Health District (Jan – Sep 2016)



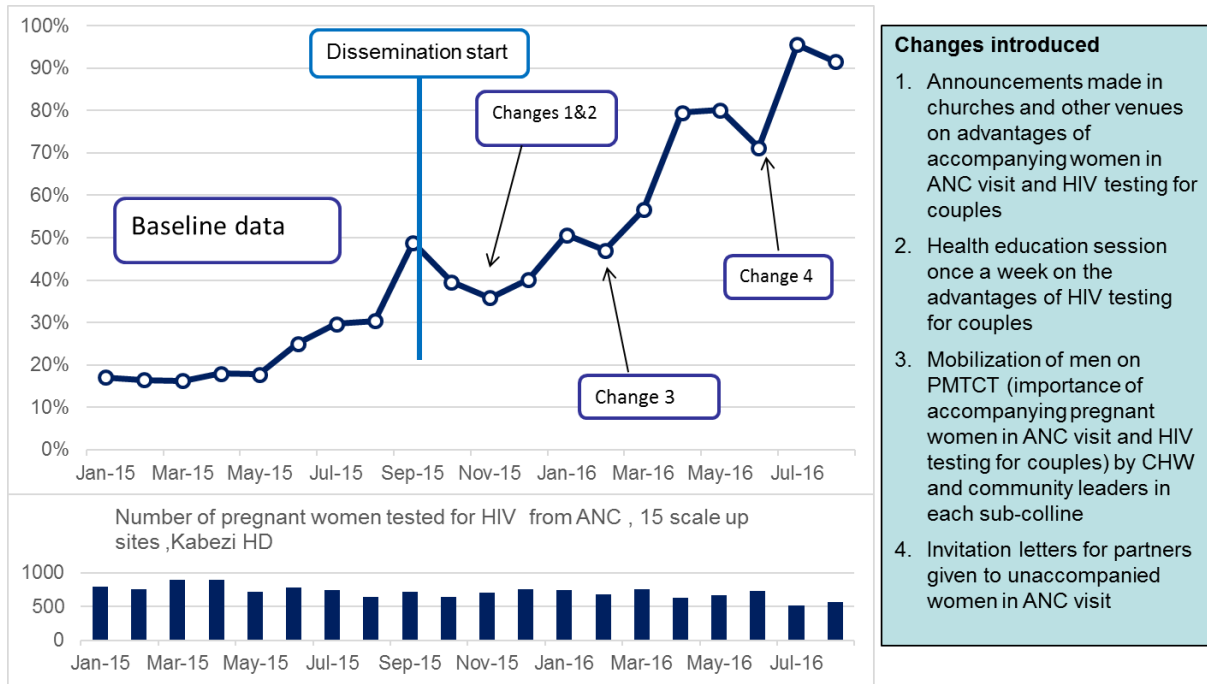
- Results: Figure 5** shows the percentage comparison of pregnant women coming for early first ANC visits between 5 pilot sites versus 9 scale-up sites in Musema Health District from April 2015 to August 2016.

Figure 5: Burundi: Percentage comparison of early ANC in 5 demonstration sites versus 9 scale up sites, Musema Health District (Jul 2012 – Aug 2016)



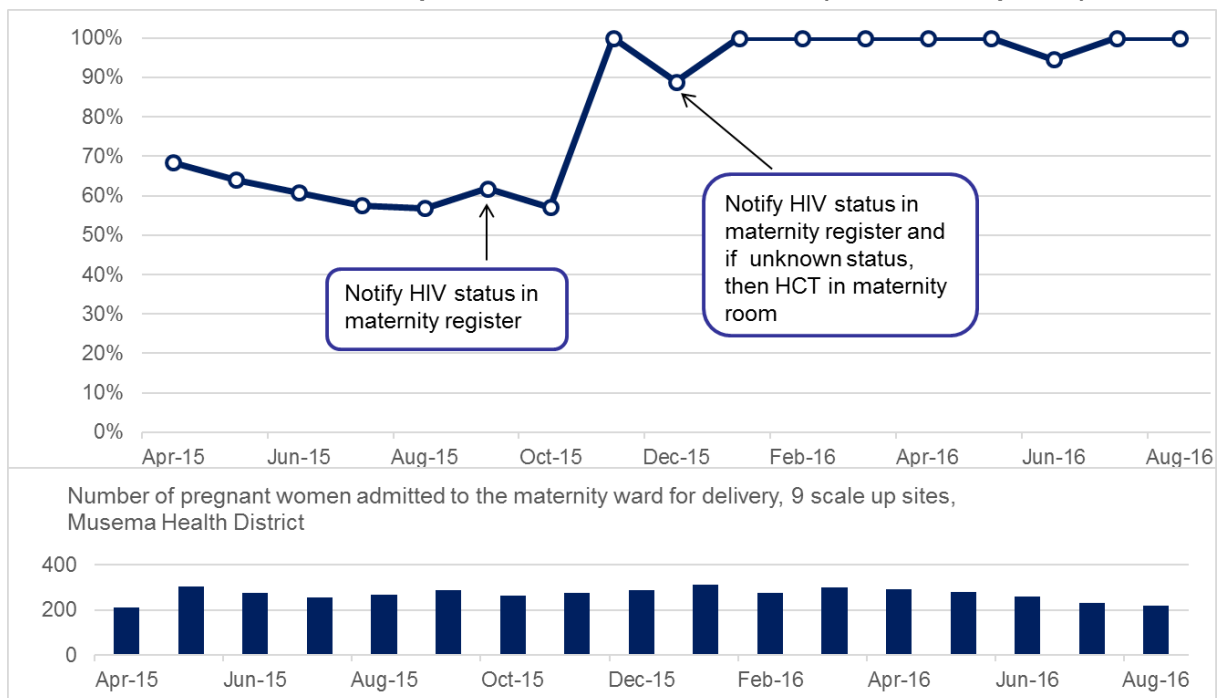
- **Results:** Figure 6 shows that pregnant women tested for HIV during ANC visits whose partners are also tested increased in 15 scale up sites in Kabezi Health District by implementing various changes from phase 1.

Figure 6: Burundi: Percentage of pregnant women tested for HIV from ANC whose partners are tested, 15 scale up sites, Kabezi Health District (Jan 2015-Aug 2016)



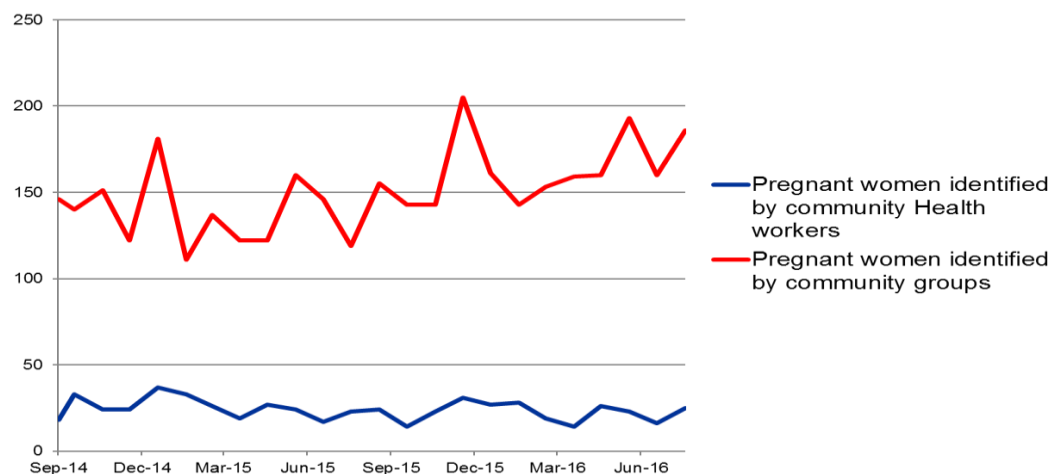
- Changes introduced were:
 1. Announcements made in churches and other venues on advantages of partners accompanying women to ANC visits and HIV testing for couples
 2. Health education session once a week on the advantages of HIV testing for couples
 3. Mobilization of men on PMTCT (importance of accompanying pregnant women in ANC visit and HIV testing for couples) by CHW and community leaders in each sub-colline
 4. Invitation letters for partners given to unaccompanied women during ANC visit
- **Results: Figure 7** shows the increased percentage of pregnant women admitted to the maternity ward for delivery with known HIV status in 9 scale-up sites in Musema Health District by implementing two changes:
 1. Notify HIV status in maternity register.
 2. If unknown HIV status, then HCT in maternity room.

Figure 7: Burundi: Percentage of pregnant women admitted to the maternity ward for delivery with known HIV status, 9 scale-up sites, Musema Health District (Jul 2012 – Sep 2016)



- **Results: Figure 8** shows how community groups are contributing to identify pregnant women in the community and how they are supporting community health workers in Giteranyi Health District.

Figure 8: Burundi: Comparison number of pregnant women identified by CHW versus community groups, Giteranyi Health District (Sept 2014-Sept 2016)



IMPROVEMENT IN KEY INDICATORS

Activity	Indicators	Baseline (July 2012)	Nov 2015	Feb 2016	April 2016	August 2016
Implementing a PMTCT improvement intervention	% of pregnant women tested for HIV during ANC visits	47% (69 sites in 4 provinces – Muyinga, Gitega, Karusi, Ngozi)	99% (69 sites in 4 provinces)	98% (69 sites in 4 provinces)	94% (69 sites in 4 provinces)	95% (35 sites in 2 provinces)
	% of women attending ANC visits before 14 weeks	8% (67 sites in the 4 provinces)	42% (69 sites in 4 provinces)	44% (69 sites in 4 provinces)	52% (69 sites in 4 provinces)	56% (35 sites in 2 provinces)
	% of pregnant women attending ANC and tested for HIV whose partners are tested for HIV	0% (69 sites in the 4 provinces)	72% (69 sites in 4 provinces)	75% (69 sites in 4 provinces)	67% (69 sites in 4 provinces)	69% (35 sites in 2 provinces)
	# of exposed children tested for HIV at 18 months	9 (70 sites in the 4 provinces)	264 (70 sites) October 2014 until Nov. 2015	304 (70 sites) October 2014 until Feb 2016	358 (70 sites) October 2014 until Apr 2016	438 (35 sites) October 2014 until August 2016

GENDER INTEGRATION

ASSIST continues to promote and track male partner involvement in PMTCT as a way to improve maternal and child health outcomes as well as male partner HIV outcomes. Involvement is measured through the percentage of male partners of women enrolled in PMTCT services tested for HIV. In Phase II, ASSIST is also tracking linkage to services for male partners who test for HIV (to care and

treatment for those who test positive, and to VMMC for those who test negative). ASSIST Burundi expects to introduce change ideas related to gender issues in order to improve adherence to ARVs and retention to care and treatment.

SUSTAINABILITY AND INSTITUTIONALIZATION

ASSIST is working closely with all levels of the health system, from health districts and provinces to the central level, to closely link their improvement work. The project is actively engaging national policy makers, as well as provincial and district health managers in all phases on design and implementation of work, especially in collection, synthesis, and validation of the best practices as well as in change package elaboration/validation and dissemination. District and Provincial Health Management teams (DHMTs and PHMTs) are regularly mentored on QI with district coaches providing support to facility QI teams.

With other PEPFAR implementing partners, ASSIST is contributing to national health systems strengthening efforts by building improvement capacity and by linking different complementary departments in this effort, including the National Health Information System, the Human Resources Department, clinical/technical departments, and the planning/policy department. We expect that this synergistic approach will create the opportunity to design a National Quality Improvement Strategy.

CÔTE D'IVOIRE

BACKGROUND

With PEPFAR funding, the USAID ASSIST Project is working in Cote d'Ivoire in collaboration with the Ministry of Health to:

- Provide technical expertise to implementing partners (IPs) in the implementation of their HIV and AIDS improvement activities at PEPFAR supported facilities and establish a QI system in the four University (teaching) hospitals; and
- Build the capacity of the General Health Directorate within the newly established MOH QI unit Direction Medicine Hospitaliere (*DMH*) to strengthen the capacity for improving care at the central level.

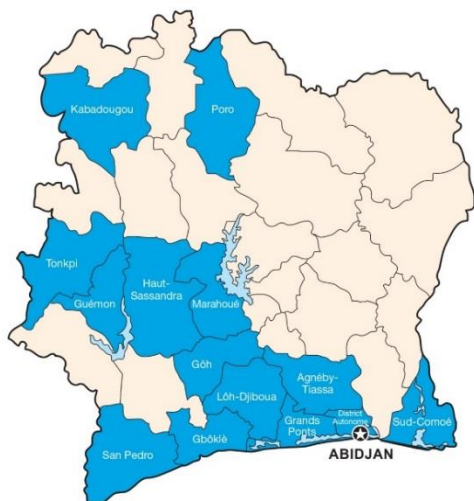
Specifically, ASSIST works towards building a QI approach into the health system in Cote d'Ivoire. Currently, no infrastructure exists to provide orientation and guidance to managers, or to manage QI in the health system. ASSIST is also working to increase the retention rate for patients on antiretroviral therapy (ART) facilities and improve health care service delivery to HIV-infected patients.

ASSIST is providing technical assistance to the eight PEPFAR clinical IPs – ACONDA, ICAP, HAI, ARIEL, EGPAF, SEV-CI – as well as to SHOPS and the National HIV/AIDS Care and Treatment Program (PNLS) to support the Cote d'Ivoire MOH in delivering high-quality HIV care and treatment services. Since 2013, USAID's instruction to ASSIST is to work above-site while the PEPFAR clinical partners provide direct support to health facilities. The role of ASSIST is to provide sufficient technical assistance to PEPFAR partners so that they are able to support health facilities in producing quality health services.

PEPFAR defined three types of intervention districts in Cote d'Ivoire for FY16 implementation. These districts represent "scale-up for saturation", "scale-up", and "maintenance". During the September 25, 2015 coordination meeting held at the Public Health National Institute, it was decided that collaborative improvement would be conducted in the scale-up for saturation districts. Thus, ASSIST is aligned with PEPFAR directives in its approach to improving the quality of HIV and AIDS care and treatment services and implementing health systems strengthening activities.

In Q4, a total of 90 sites were supported by the PEPFAR implementing partners. Since December 2015, 60 sites had started in the QI process. Thirty new sites have been added, participated in the learning session conducted in September 2016, and will next begin baseline data collection.

Scale of USAID ASSIST's Work in Côte d'Ivoire



 HIV/AIDS



MOH, DMH, PNLS,
7 PEPFAR Implementing Partners
1 Global Fund



15 out of 20 health regions
30 out of 82 health districts



105 out of 529 facilities
(30 intervention districts)





105 QI teams



15,745,741 (in 30 intervention districts)
25,236,000 total population

PROGRAM OVERVIEW

What are we trying to accomplish?	At what scale?
1. Improve the quality of HIV and AIDS care and treatment services	
<ul style="list-style-type: none"> Improve timeliness, continuity, effectiveness, efficiency, and patient-centeredness of provided services and their consistency with clinical guidelines through the improvement collaborative approach Strengthen capacity of medical providers to provide safe, timely, continuous, effective and efficient medical care Improve awareness on quality improvement experiences countrywide Strengthen health information system to support development of evidence-based decisions on improvement quality of medical care Ensure equitable access to priority “best-buy” high-impact medical services in demonstration regions TA in QI for FANTA-supported sites 	<ul style="list-style-type: none"> Health regions: 15 out of 20 Districts: 30 out of 82 100 public health facilities (60+30 new IP sites and 10 MOH-supported) in selected districts: 19% (100/529) + 5 private clinics =105 HF Catchment population facilities/communities served: 14,745,741 out of 25,892,248 people in 30 intervention districts 11 sites supported by FANTA
2. Health systems strengthening	
<ul style="list-style-type: none"> Strengthen leadership, management, and planning of MOH quality improvement unit in coordinating quality improvement activity design and implementation Establish QA/QI system in the four University Hospitals Support development of national standard documents 	<ul style="list-style-type: none"> Central Level (MOH/DMH) 4 University Hospitals (District Abidjan South, East and North; and Bouake)
 Improvement Activity	 Cross-cutting Activity

Activity 1. Improve the quality of HIV and AIDS care and treatment services

OVERVIEW

ASSIST is working to improve health care services delivery to HIV-infected patients. The project is providing technical assistance to the seven PEPFAR IPs and the PNLS to improve their capacity to support sites in delivering high quality HIV care and treatment services.

KEY ACCOMPLISHMENTS AND RESULTS

- **ASSIST provided technical assistance to PNLS to implement collaborative improvement activities on 10 sites in the southeast Sud Comoe Region** (Dec 1- 4, 2015). ASSIST organized jointly with PNLS a coaching visit in four out of the 10 sites: CHR Aboisso, PMI Aboisso, CSU Etueboué, and HG Tiapoum. During this coaching visit, the improvement team completed their work plan of change ideas introduced by care providers to solve the site's problems identified. These sites addressed the same priority areas as the sites supported by PEPFAR IPs. The six other remaining sites were coached by the PNLS.
- **ASSIST organized coaching visits in 10 sites supported by PNLS (Sud Comoe Region)** (March 21-25, 2016).
- **ASSIST organized the first learning session in Agboville and Yamoussoukro for the improvement collaborative with PEPFAR IPs** (Dec 2015).
 - In Agboville, from December 9-11, 2015 with 86 participants from 32 sites supported by EGPAF, ACONDA-VS, and ICAP.
 - In Yamoussoukro from December 16-18, 2015 with 82 participants from 35 sites supported by Ariel, HAI, SEV-CI and SHOPS. These sessions were closely organized with PEPFAR IPs. Their staff in charge of quality activities attended each of their site's sessions.
 - The staff also participated in capacity building sessions on December 8 and 15, 2015 focused on improvement among coaches. During these sessions, ASSIST shared with the participants quality concepts, development, and the role of quality improvement team and the indicators. The participants presented the baseline results on the four priority areas and developed new ideas for the change package.
- **ASSIST organized coaching visits in 60 sites supported by PEPFAR IPs (Q2-Q4)**. After the first learning session, ASSIST organized coaching visits in 55 out of 60 sites supported by PEPFAR IPs. These coaching visits were conducted in collaboration with PEPFAR IPs and the national actors of the health districts in charge of QI. During these visits, improvement teams received technical assistance about the topics taught in the previous learning session: functionality of QI teams, elaboration of flow charts to analyze and diagnose gaps in care processes, and how to calculate indicators.

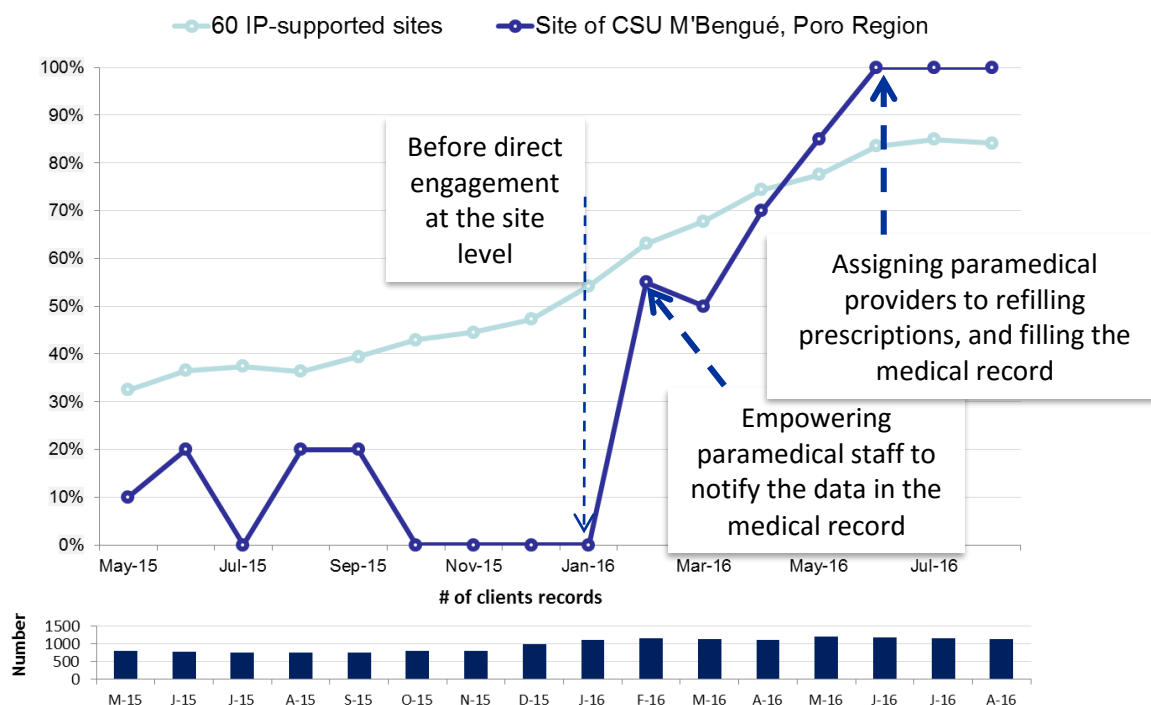
In Q3, technical assistance to PEPFAR IPs was provided during coaching visits (July 11-29, 2016). Several coaching visits were organized in different localities to provide support for sites in the implementation of collaborative activities. This support has focused on the level of implementation of action plans change ideas. Similarly, In Q4, technical assistance was also given to PEPFAR IPs during learning sessions for 60 collaborative sites in Bouake and Yamoussoukro (Aug 9- 12 and 16-19, 2016). During these session, sites shared results (time series chart) graphic and ASSIST built capacity on analysis and interpretation of graph and synthesis of ideas for change.
- **ASSIST participated in the second learning session in Yamoussoukro for the NACS project with FANTA III** (Dec 15-18, 2015). Eleven (11) sites attended where they presented their results after changes were introduced. Some of the changes implemented by sites included coaching the providers on nutrition activities and integrating nutrition in community workers' activities.)
- **ASSIST met with FANTA III staff to discuss NACS QI** (March 9, 2016). Ten sites were visited and coached on improvement methods and nutrition methods in February 2016. The self-management progress form proposed by ASSIST will be adapted and implemented in the 10 sites. A Memorandum of Understanding was developed between FANTA and ASSIST.

- **ASSIST organized three meetings to launch QI in four university hospitals** (January 7, February 25, and March 25, 2016). ASSIST discussed the launch of the QI activities with the four university hospital partners. The QI activities are being implemented in the pediatric unit and focus on improving documentation and HIV pediatric care. The first learning session for developing the changes package took place in May 2016.
- **Organized coordination meetings with PEPFAR IPs** (July 20, 2016). Two meetings were held at the National Program of Fight against AIDS (PNLS). Discussions focused on learning session, coaching, and coordination and Sud-Comoe activities.
- **Scaled up collaborative to 30 new sites** (Sept 2016). The scale up was supported by the six clinical CDC/PEPFAR implementing partners. Learning sessions were organized from September 13-16, 2016 in Yamoussoukro. This brings the number to 90 total sites in the collaborative approach, with 15 sites per implementing partner. The 30 new sites will use the same indicators as the 60 previous sites of the pilot phase and will test the change package.

Results

- **Figure 9** shows early improvement of ART client records with all items filled in since the beginning of quality improvement activities (May 2015 – Aug 2016). There is an increase from 33% to 84% after the implementation of major change idea: delegating filling out medical records to paramedics and health care care providers. We also can see the results of the CSU M'Bengué increasing from 10% in May 2015 to 100% in August 2016 with the introduction of two change ideas:
 - Assign to the nursing staff prescription renewals
 - Delegate nursing registration data

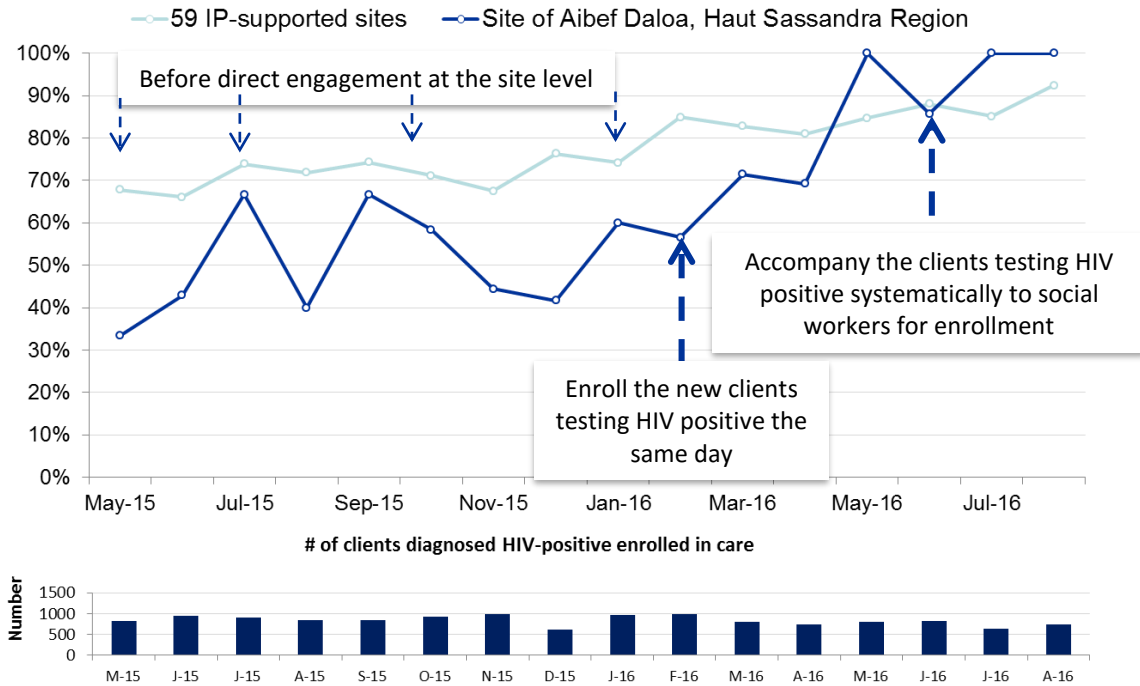
Figure 9: Cote d'Ivoire: Percentage of ART client records with all items filled, 60 IP-supported sites (May 2015 – Aug 2016)



- **Figure 10** shows results of recently diagnosed HIV-positive clients enrolled in care in 59 IP supported sites from May 2015 – Aug 2016. Continuous improvement can be seen, from 68% to 92% from May 2015 to August 2016. In the site of AIBEF Daloa, Haut Sassandra region supported by SEV-CI, there is an increase in the performance of this indicator from 33% to 100% from May 2015 to August 2016 after the implementation of some of the changes ideas:

- Enroll the new clients testing HIV positive on the same day
- Accompany the clients testing HIV positive systematically to social workers for enrollment

Figure 10: Cote d'Ivoire: Percentage of recently diagnosed HIV-positive clients enrolled in care, 59 IP-supported sites (May 2015 – Aug 2016)



- **Figure 11** shows an early improvement in clients alive and on ART after 6 months of treatment in 60 IP-supported sites from May 2015 – Aug 2016. The increase is from 72% to 88% after implementation of the change idea: changing task delegation through the renewal of prescriptions for ART by paramedical and other health care producers. The CHR Daloa now implements the following change idea: negotiation of the appointment date with patients.
- **Figure 12** shows results of HIV-exposed infants (6-8 weeks) who initiated Cotrimoxazole two months prior to collection of dried blood spot in 53 IP supported sites from May 2015 – Aug 2016. This indicator already had a good performance before the introduction of quality improvement activities. Efforts must be sustained through the implementation of change ideas to reach the 100% target set.

Figure 11: Cote d'Ivoire: Percentage of clients alive and on ART, 6 months after starting treatment, 60 IP-supported sites (May 2015 – Aug 2016)

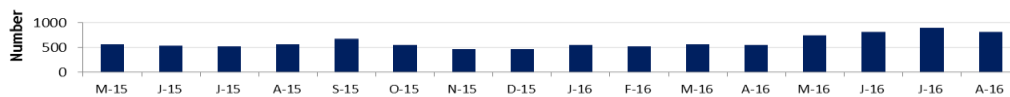
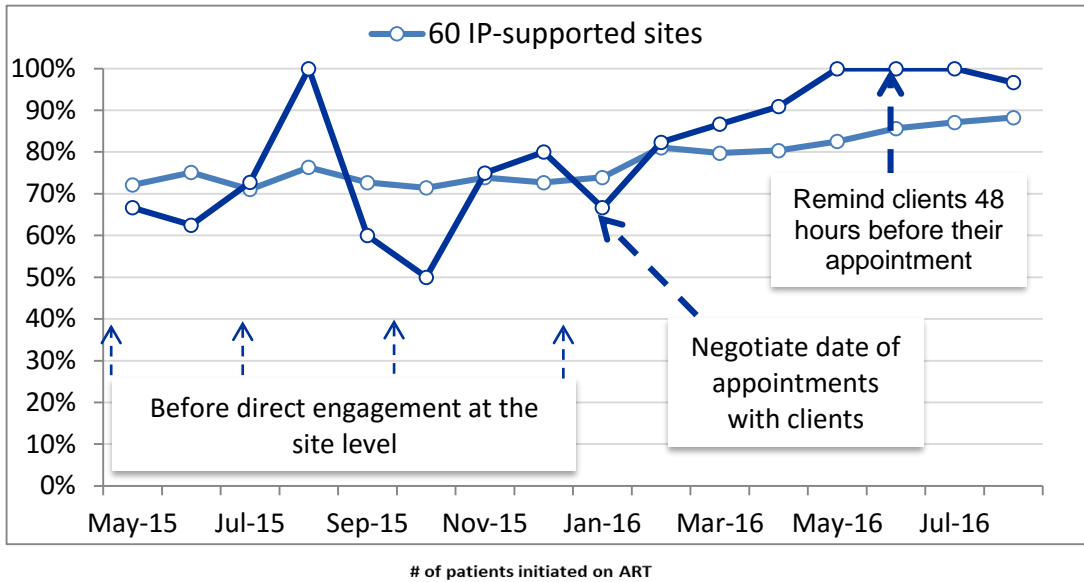
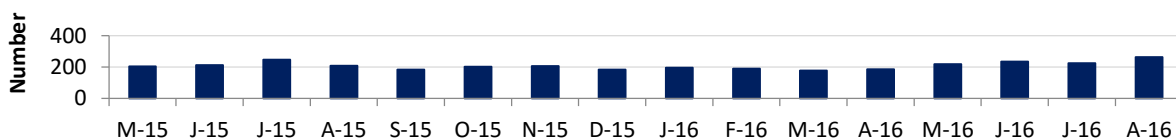
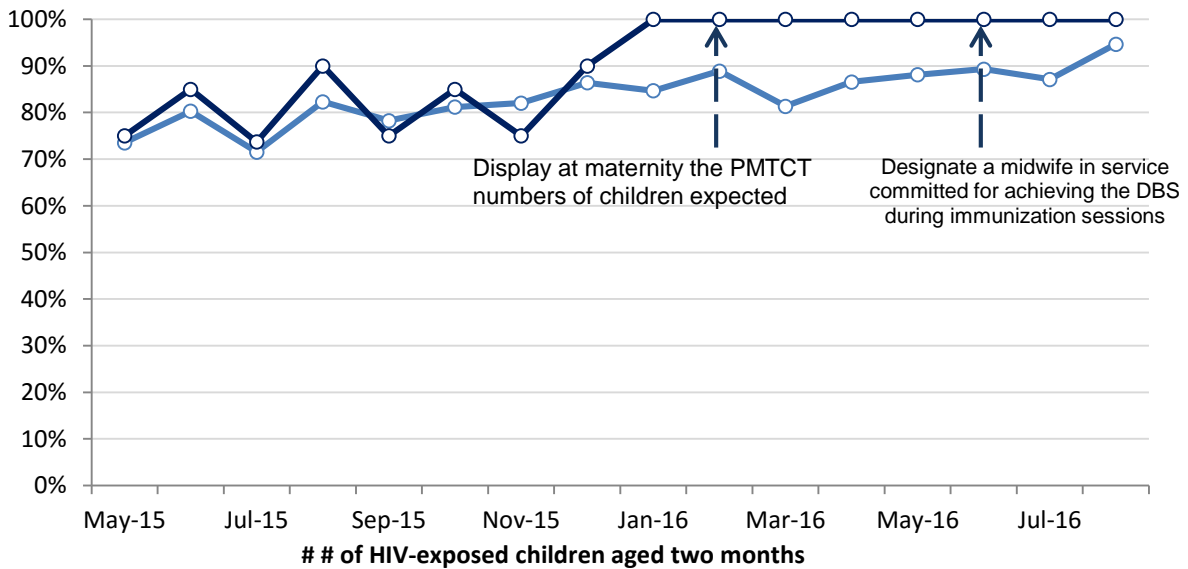


Figure 12: Cote d'Ivoire: Percentage of HIV-exposed infants between 6 and 8 weeks initiated on Cotrimoxazole two months prior to collection of dried blood spot, 53 IP-supported sites (May 2015 – Aug 2016)

—○— 53 Ips supported sites —○— Site of Hopital Methodiste Dabou, Abidjan 1-Grands Ponts Region



Activity 2: Health systems strengthening

OVERVIEW

ASSIST is supporting the MOH to build a QI approach within the current health system. During a policy meeting held in February 2014, it became clear that there was little engagement on QI in health care settings in the country. There was no infrastructure to lead the QI process and develop the QI system in order to integrate it to the national health system. In November 2014, the former QI department, *Service de la Promotion de l'Assurance Qualité en Santé*, dissolved after being operational for five years. In February 2015, a new MOH department, the Directorate of Hospital Medicine Direction Medicine Hospitaliere was put in charge of QI with new leaders and a new organizational structure.

KEY ACCOMPLISHMENTS AND RESULTS

- **ASSIST organized training session for the head of unit in charge of quality in the health district in Agboville and Yamoussoukro** (Dec 2015). Sixteen (16) people attended the training session. During the session, ASSIST shared quality concepts, a gaps analysis framework, and the role of improvement coaches. The participants developed change packages for their supported activities. The change package included delegating the filing of non-clinical information in patient records to non-medical persons, and the reorganization of appointments based on a patient's availability.
- **Development and Finalization of the policy document of health care and services quality improvement** (March - September 2016). The project, in collaboration with the MOH Directorate organized a workshop to develop the first draft of the policy of health care and services quality improvement in collaboration with national and international experts involved in improving the quality of care and treatment services in Cote d'Ivoire. In June, the Minister of Health and national and international stakeholders involved in quality of care and treatment services participated in the meeting to review the draft strategy. In September, two workshops on the quality improvement strategy plan were held with the technical working group under the lead of the Ministry of Health and Public Hygiene and the DMH respectively in Grand Bassam and Yamoussoukro. This resulted in a national policy document for improving the quality of health care and services adopted by the Ministry of Health in Cote d'Ivoire.

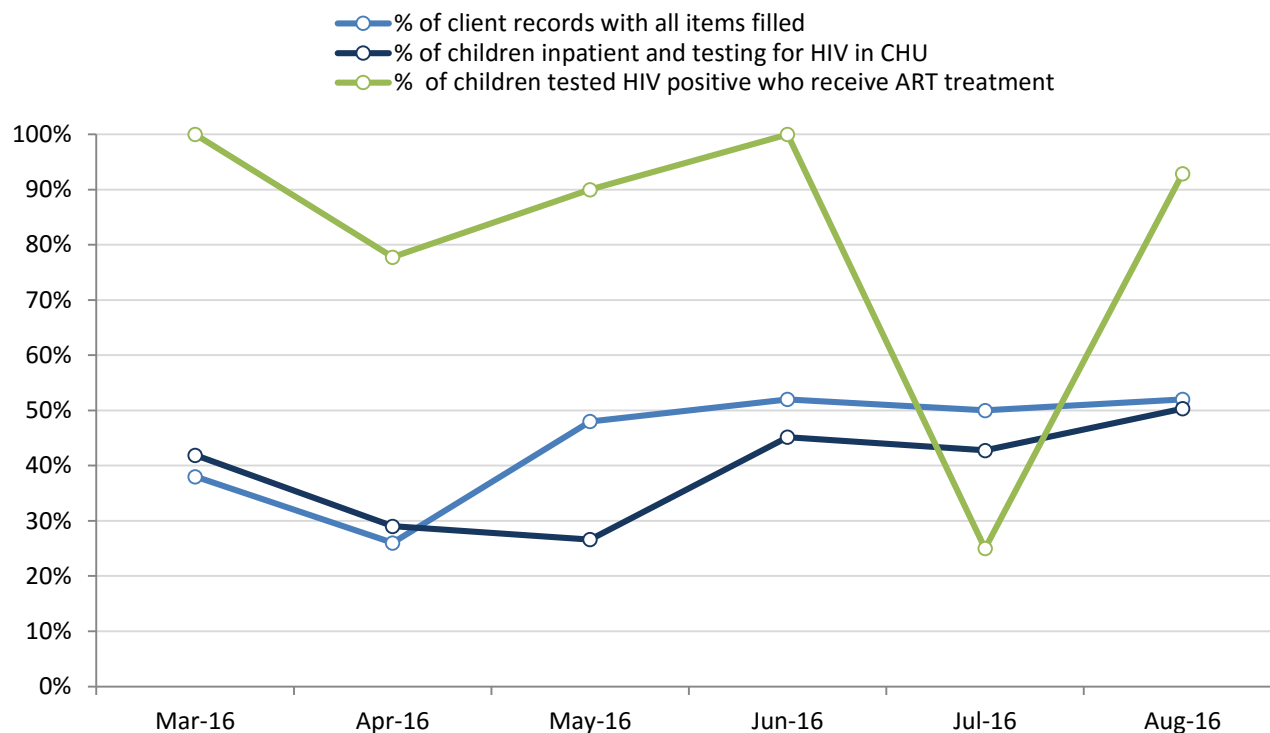
Cote d'Ivoire Minister of Health Raymonde Goudou Coffie expressed joy at the adoption of the national policy document to improve the quality of health care & services and stated that while considerable efforts have been made by the Government to improve the health system—including the rehabilitation and construction of health infrastructure, improving the wage index of health staff and the renewal of technical platform—the remaining challenge is the quality of care in the public health facilities.

- **Organized training sessions for six PEPFAR IP** (Agboville - April 12-15, 2016 and Yamoussoukro - April 19-22, 2016). During this session, participants developed change packages for their supported activities.
- **Organized QI orientation session of CHU (university teaching hospital) heads of services and quality managers** (May 18-20, 2016). During this session, held in Yamoussoukro, participants received basic training in QI.
- **Discussed and incorporated gender integration during learning sessions and QI trainings** (May-Aug, 2016) for 90 collaborative sites, data collection tools include a space for sex so that data can be collected and analyzed sex-disaggregated. Results for the 60 pilot sites show that 77% (46 out of 60 from May to August 2016) reported gender data at least once.
- **Provided technical assistance to the DMH during learning session of the four CHUs** (Aug 17-19, 2016). During this session pediatrics and gynecology QI team, received basics knowledge on the collaborative approach.

Results

- **Figure 13** shows baseline improvement indicators surveying 4 teaching hospitals (Cocody, Yopougon, Treichville and Bouaké) over the period of 6 months.

Figure 13: Cote d'Ivoire: Baseline indicators, 4 teaching hospitals (Cocody, Yopougon, Treichville and Bouaké) (March 2016 – Aug 2016)



IMPROVEMENT IN KEY INDICATORS

Table A: Improvement indicators 60 sites PEPFAR IP

Activity	Indicators	May 2015 (Baseline)	July 2015 (Baseline)	October 2015 (Baseline)	February 2016	May 2016	August 2016
Improve quality of HIV/AIDS care and treatment services in Cote d'Ivoire	% of ART client records with all items filled	33% (57/60 sites)	39% (55/60 sites)	45% (56/60 sites)	67% (54/60 sites)	80% (58/60 sites)	84% (59/60 sites)
	% of clients diagnosed HIV positive and enrolled in care	68% (57/60 sites)	74% (55/60 sites)	72% (56/60 sites)	86% (55/60 sites)	85% (57/60 sites)	92% (58/60 sites)
	% of patients alive and on ART 6 months after treatment initiation	72% (59/60 sites)	71% (59/60 sites)	71% (58/60 sites)	81% (54/60 sites)	82% (59/60 sites)	88% (58/60 sites)
	% of children aged 6 and 8 weeks born to HIV positive mothers who initiated Cotrimoxazole two months prior to collection of dried blood spot	73% (51/60 sites)	72% (49/60 sites)	81% (50/60 sites)	89% (49/60 sites)	89% (52/60 sites)	95% (54/55* sites)

* 05 sites did not implement QI activities (CAT Daloa, CAT San Pedro, CAT Adjamé, Espace Confiance et Centre Plus)

Table B: Improvement Indicators for 4 CHUs (Baseline)

Activity	Indicators	March 2016 (Baseline)	April 2016 (Baseline)	May 2016 (Baseline)	June 2016 (Baseline)	July 2016 (Baseline)	August 2016 (Baseline)
Improve quality of HIV/AIDS care and treatment services in Cote d'Ivoire	% of ART client records with all items filled	38% (4/4 sites)	26% (4/4 sites)	48% (4/4 sites)	52% (4/4 sites)	50% (4/4 sites)	52% (4/4 sites)
	% of children inpatient and testing for HIV in CHU	42% (4/4 sites)	29% (4/4 sites)	27% (4/4 sites)	45% (4/4 sites)	43% (4/4 sites)	50% (4/4 sites)
	% of children tested HIV positive who receive ART treatment	100% (4/4 sites)	78% (3/4 sites)	90% (4/4 sites)	100% (3/4 sites)	25% (2/4 sites)	93% (4/4 sites)

GENDER INTEGRATION

Discussed and incorporated gender integration during learning sessions and QI trainings for 90 collaborative sites. ASSIST has asked implementing partners to report data by sex, but very little has been reported. In FY17, ASSIST will analyze sex-disaggregated data to identify gender-related gaps and work with QI teams to develop change ideas to close them. We expect PEPFAR IPs to report all four indicators by sex.

SUSTAINABILITY AND INSTITUTIONALIZATION

USAID ASSIST is building QI capacity of the key MOH QI units: the DMH and the National HIV/AIDS Care and Treatment Program. These units are gaining hands-on experience in co-facilitating and supporting QI work with IPs. In addition, to promote sustainability and institutionalization, ASSIST is helping create a critical mass of competent health providers using QI concepts at the health facility level; helping develop a network of QI experts to allow experience and best practice sharing; and promoting transfer of QI competencies to PEPFAR IPs and health facility staff.

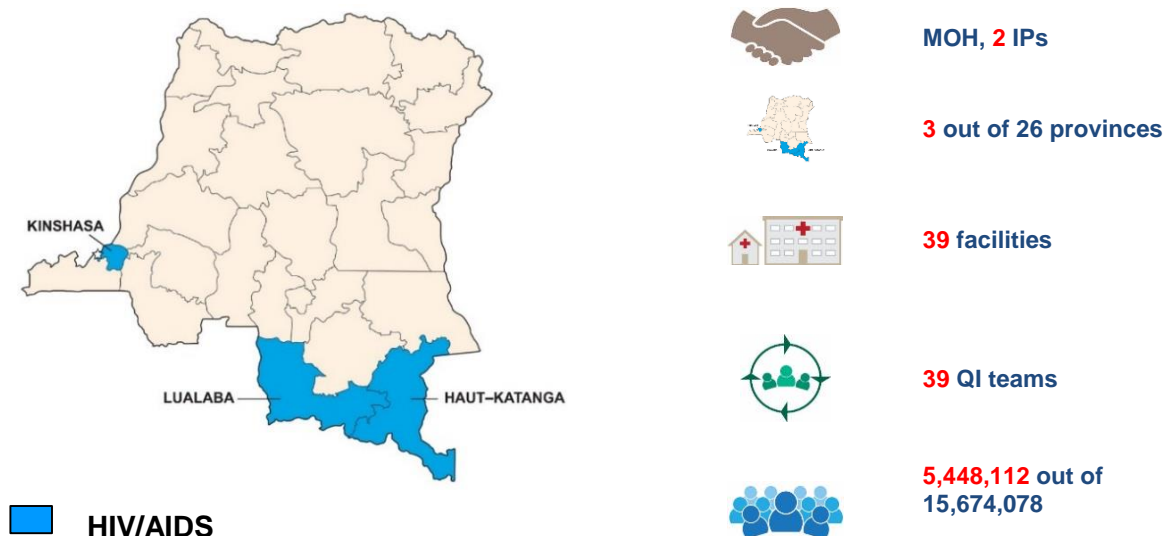
DEMOCRATIC REPUBLIC OF CONGO

BACKGROUND

In FY14, the USAID ASSIST Project began working to support the Ministry of Health (MOH) in the Democratic Republic of Congo (DRC) to improve nutrition services for HIV clients through the integration of nutritional assessment, counselling, and support (NACS) into HIV care and treatment in coordination with USAID/PEPFAR implementing partners. In FY15, the USAID ASSIST Project expanded work to improve nutrition services for HIV clients by scaling up best practices to new sites in Kinshasa and Katanga in partnership with the Food and Nutrition Technical Assistance Project (FANTA) and the Livelihoods and Food Security Technical Assistance Project (LIFT). ASSIST was also asked to improve PMTCT services and retention in care assuring good adherence to ART for persons living with HIV, including children and key populations, in targeted facilities in Orientale and Katanga provinces, in collaboration with the Integrated HIV/AIDS Project (ProVIC) implemented by PATH and the Management Sciences for Health (MSH)-led Project de Santé Intégré (PROSANI, Integrated Health Project).

In FY16, ASSIST shifted focus to address only HIV care and treatment services improvement in targeted sites in three provinces: Haut-Katanga, Lualaba, and Kinshasa. This work was conducted with ProVIC and PROSANI.

Scale of USAID ASSIST's work in the Democratic Republic of Congo



PROGRAM OVERVIEW

What are we trying to accomplish?	At what scale?
1. Improve HIV care and treatment for people living with HIV (PLHIV)	
Improve HIV services and retention in care and assure good adherence to therapy for all people living with HIV in target facilities in collaboration with other IPs	<ul style="list-style-type: none"> Provinces: 3 out of 26 provinces (Kinshasa, Haut-Katanga, and Lualaba) Health zones: 4 out of 35 in Kinshasa; 8 out of 28 in Haut Katanga; 2 out of 14 in Lualaba Facilities in selected Health Zones: 39 out of 393 (10%) 9 out of 144 health facilities in Kinshasa; 18 out of 256 in Haut Katanga; 12 out of 63 in Lualaba Catchment population: 5,448,112 out of 15,674,078
2. Build capacities at all levels in QI and related health system strengthening	
Strengthen the capacities of national, provincial and Health Zone managers and providers to apply improvement skills	<ul style="list-style-type: none"> Reinforce and institutionalize capacities in QI among managers and providers at national (<i>Programme National de Lutte contre le VIH/SIDA</i>, <i>PNLS</i> and the MOH QI Unit), provincial and zonal levels
Improvement Activity	Cross-cutting Activity

Activity 1. Improve HIV care and treatment for people living with HIV (PLHIV)

OVERVIEW

ASSIST is working in Kinshasa, Haut-Katanga, and Lualaba provinces in 39 health care facilities in partnership with the MOH, PATH/ProVIC, and MSH/PROSANI to improve HIV care and treatment for PLHIV and ensure good adherence to therapy. ASSIST is providing technical support to these facilities in quality improvement through the collaborative approach by supporting QI teams to initiate, test, and implement changes, to reduce gaps in ART coverage, retention in care and well-being of PLHIV.

As the technical and standard-setting body of the MOH on HIV/AIDS, the National AIDS Control

Program is involved in the implementation process of the collaborative approach to ensure that it is consistent with national norms and guidelines on HIV care and treatment. The National Multisector AIDS control program (PNMLS), which ensures the coordination and the leadership of activities against HIV/AIDS in the DRC, is involved in QI activities to ensure advocacy, resource mobilization and institutionalization. The Provincial Health Division for Kinshasa, Haut Katanga, and Lualaba are also involved in accompanying Health Zones to implement national norms and guidelines on HIV care and treatment.

Once a month, ASSIST, PATH/PROVIC, MSH/PROSANI, and MOH coaches conduct a joint coaching visit to accompany QI teams in their work. Then, ASSIST and Health Zones coaches organize follow-up visits to ensure that QI teams are well functioning, testing change ideas, implementing them, and documenting best practices. They closely monitor the quality of data being collected and the level of performance reached.

KEY ACCOMPLISHMENTS AND RESULTS

- **Conducted a baseline assessment and analysis for 39 health care facilities** (Kinshasa, Katanga and Orientale province) (July-November 2015). ASSIST in collaboration with the DRC MOH (National AIDS Control Program and National AIDS Multisector Control Program) conducted a baseline assessment to identify strengths and weaknesses of HIV services in PEPFAR-targeted provinces. HIV-positive patient records were reviewed for those receiving ART treatment and those who were not being treated according to the national standard norms set by the government. The analysis for the baseline assessment was finalized between September and November 2015.
- **Organized a three-day workshop in each of the three provinces to share baseline findings** (Nov 11-13, 2015 in Kinshasa, Nov 17-19, 2015 in Haut Katanga, and Nov 21-23, 2015 in Lualaba). The objective was to share the baseline results and orient providers and managers from target health care sites, health zones, provinces, and the central level of MOH on: (1) quality improvement, (2) HIV gaps analysis framework, and (3) the improvement package. Participants included PNLS staff, PNMLS, 5th Directorate of the MOH (national health information system directorate-QI unit), health provincial divisions, Health Zones, PATH/PROVIC, PROSANI, ICAP and Glaser Foundation staff. The three workshops were facilitated by the Regional Director and a Senior Improvement Advisor, both from the ASSIST regional office for Francophone Africa and ASSIST DRC staff. As a result of these workshops:
 - 137 health care providers and 8 individuals from IPs were oriented
 - A quality improvement team (QIT) was set up in each targeted health care facility under the supervision of the related Health Zone
 - A QI plan with improvement objectives, change ideas, timeline, indicators, and persons responsible was developed by each facility according to its HIV care and treatment initial process diagram.
- **Data showed key quality gaps** among the HIV continuum of care (**Figure 14**) and for HIV-positive patients under ART treatment follow-up (**Figure 15**). The results were first shared with the USAID Mission in DRC, then key IPs and the MOH.

Figure 14. DRC: Quality gaps among the HIV continuum of care, 39 sites, Kinshasa, Katanga and Orientale provinces (sample: 1,048 patient files) (July-Aug 2015)

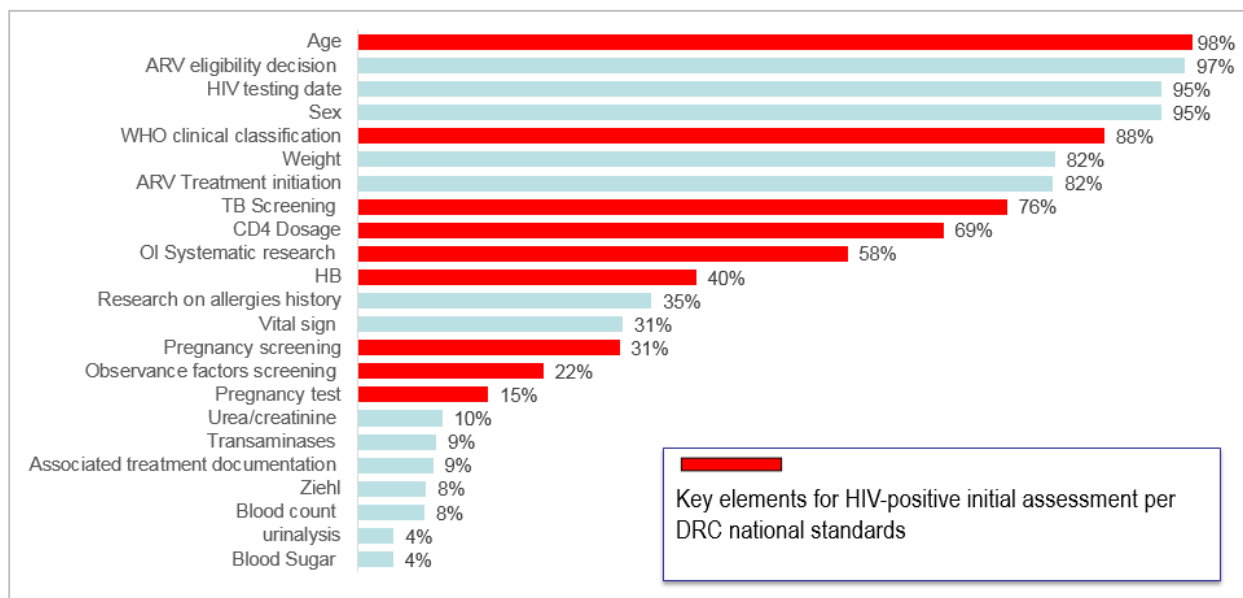
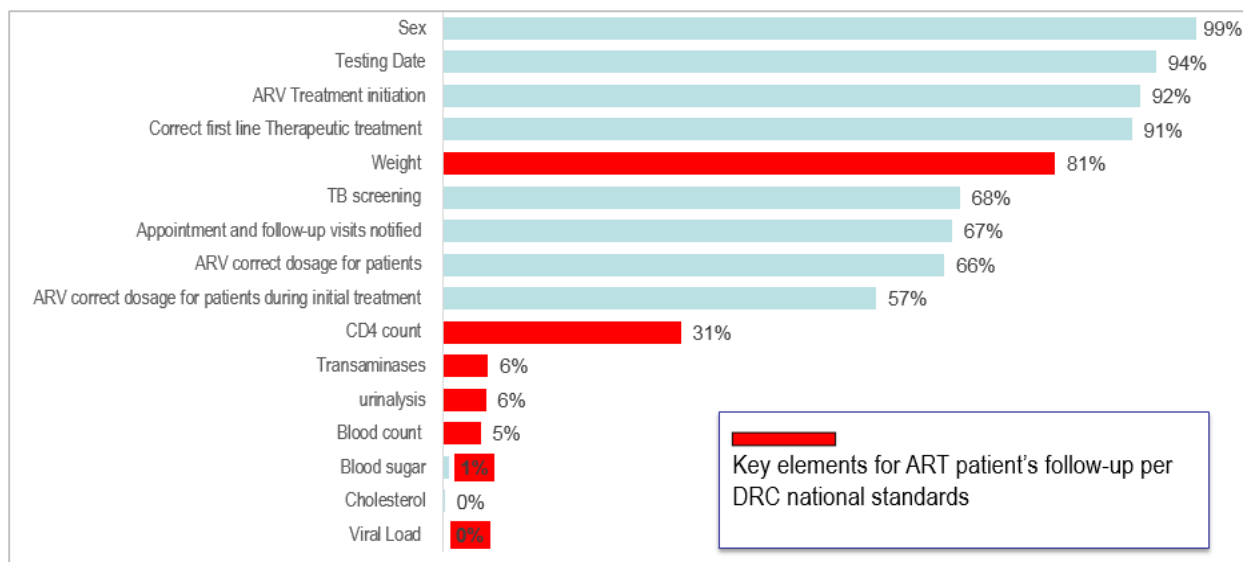


Figure 15. DRC: Percentage of items filled in files of patients coming for ART follow-up, 39 sites, Kinshasa, Katanga and Orientale provinces (sample: 1,048 files) (July – Aug 2015)



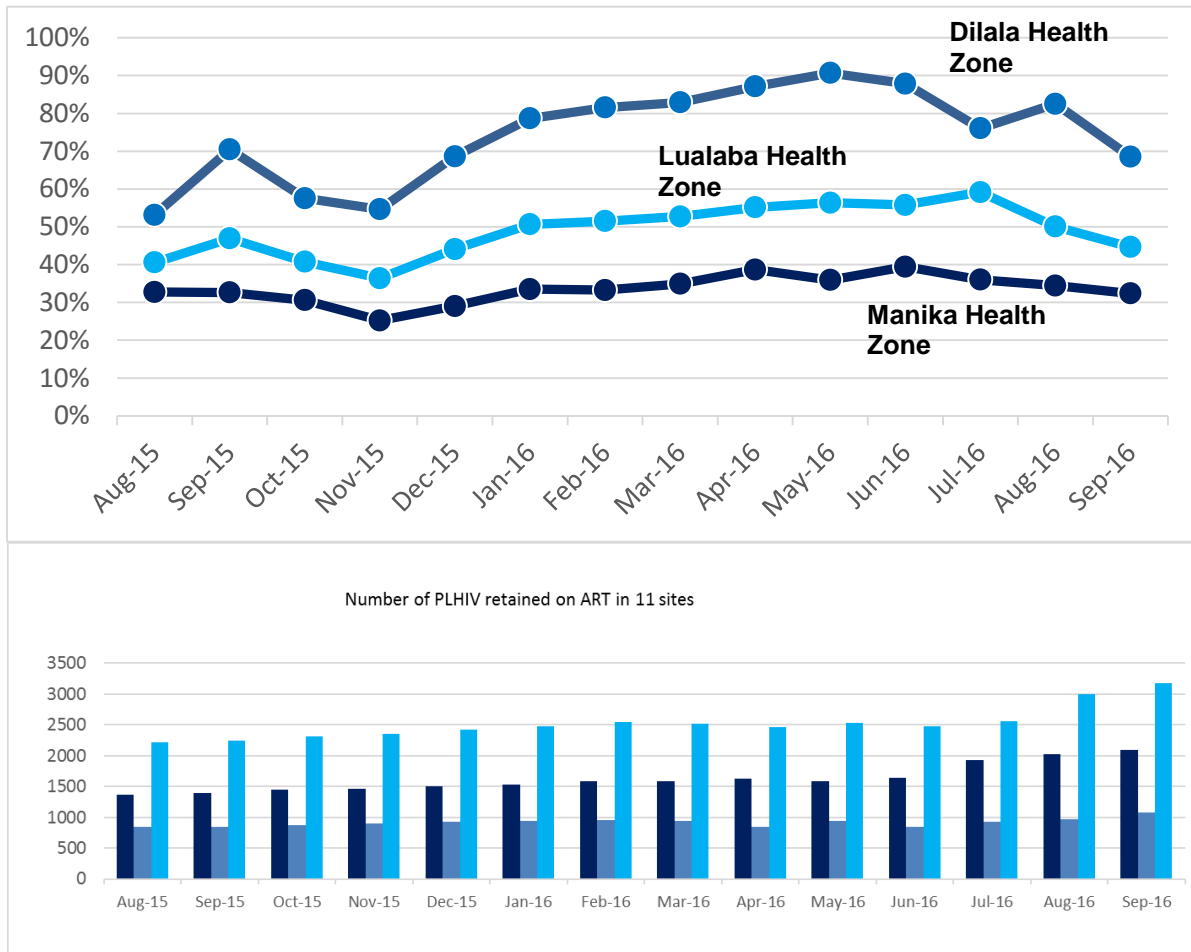
- The 39 sites evaluated include 10 general hospitals, three provincial hospitals, 18 peripheral health facilities, five referral health facilities, and two hospitals centers. Among these sites, 16 were urban, seven rural and 15 urban-rural; 4,560 patient charts were reviewed. Key findings from the baseline assessment include:
 - **Counseling / Screening**
 - HIV is not integrated to care processes in health facilities; many missed opportunities for screening;
 - Only 30.8% of surveyed sites claim to offer specific services for key populations (Commercial Sex Workers, MSM and IDUs) and only 25.6% offer services for orphans and vulnerable children
 - **Linkage and initial assessment**
 - TB diagnosed in 56% of the sites

- CD4 in 51% of sites
 - Viral load in 5% of sites
 - Contraceptive Prevalence Rate in 0% sites
 - Basic laboratory tests in pre-treatment such as renal function tests (10%), liver (9%) and blood count (8%) are limited
- **Pre-ART**
 - 53.1% of pre-ART patients missed at least one follow-up visit
 - 9% of pre-ART patients are lost to follow-up (that is, three successive missed appointments)
 - Only 30% of non-eligible patients are monitored once per month in the first three months
 - Pre-ART files are not complete (n = 565 cases) including: the date of laboratory tests (49.9%); the final weight (43.5%); the TB status at last consultation (33.8%); initial CD4 result (48.5%); last CD4 last result (26.2%)
- **ART**
 - 43.6% of sites experienced ARV stock-outs in the last three months preceding the survey
 - 36% of ARV stock cards are outdated
 - 35.2% of patients missed at least three successive visits while patients classified as "lost" are 5%
 - Only 7% of patients are looked for after each missed visit
 - The dosage of prescribed ARV is respected in 66.2% of cases
 - Low biological monitoring of patients on ARVs (e.g., CD4 latter in 34.4% of cases, and viral load 0%)
 - Low clinical monitoring of ARV patients (e.g., weight 54.9%, TB status at the last visit 36.5%)
 - The evaluation of adherence to treatment is recorded at the last visit in only 14.3% of cases.
- **Tuberculosis The diagnosis of TB is only available in 22 of 39 sites (56%)**
 - The TB status checked and client notified at the last consultation among only 35.6% of patients on ART
 - Only 18.5% of TB patients are put on anti-TB treatment
 - Isoniazid prophylaxis of HIV patients, although recommended by national standards, is provided in one of 39 (2.6%) sites
- **Drafted “Aims, Indicators and Content” packages** (Nov 2015). Based on the baseline results and the HIV Gaps Analysis Framework, the packages were drafted and validated with the MOH and key IPs.
- **Conducted monthly coaching visits in each of the improvement collaborative facilities** (Dec 2015 – June 2016, Sept 2016). ASSIST provided support for coaching visits to ensure that QI activities in 39 health facilities, in 14 Health Zones within the three provinces are effective. To improve ART coverage, the retention of patients in care and their wellness, ASSIST continued to provide technical support to Health Zones’ coaches to ensure that the national minimum package of HIV care (nutrition, cotrimoxazole, screening for TB, OVC care, psychosocial support, management of opportunistic infections) was implemented at all 39 health facilities. During these visits, QI teams used the PDSA cycle to test and document changes. In Lualaba Province, particularly, there was a lack of data collection tools and a high number of HIV-positive clients on ART lost to follow-up. Many health providers were not oriented on how to fill in the data collection tools. To resolve these challenges, in April and May 2016, ASSIST in collaboration with health provincial division of Lualaba and MSH/PROSANI, conducted an audit of PLHIV in all the improvement collaborative facilities in the province to determine the exact number of patients on ART. PROSANI provided the facilities with data collection tools in June 2016. ASSIST then oriented health providers on site during coaching and follow up visits on how to fill in the tools.
- **Health facilities and health zones developed QI plans** (Feb 2016).
- **USAID conducted SIMS visits in high-volume sites in Kinshasa (Elonga Health center) Haut Katanga (Kamalondo General Hospital), and Lualaba provinces (Mwangeji and**

Gecamines Hospitals) (April, June 2016). The DRC USAID team's most important finding was that all QI teams visited were functional, developed their QI plans, and are documenting changes. The ASSIST team continued to support QI teams to document changes, and provided health zone management teams with technical assistance to develop their respective QI plans. Another SIMS visit was conducted in Lualaba province (July 2016) in Manika health center, Lulu, Mupanja and Kawama health centers. Findings from the USAID visit showed: the unavailability of HIV data management tools and poor record of HIV data; poor archiving files; a discrepancy between the data source documents, transmission and compilation; low HIV screening of children, poor documentation and tracking of PLHIV lost to follow up, reference of key populations; the lack of integration of nutritional assessment counselling and support activities; non-functionality of support groups; the absence of procedures for archiving and providing ARV drugs. In addition, almost all sites did not monitor the outcome of exposed children 6 weeks after breastfeeding to assess the number of infections averted. It was highly recommended for ASSIST to integrate QI activities within new health facilities in Lualaba Province.

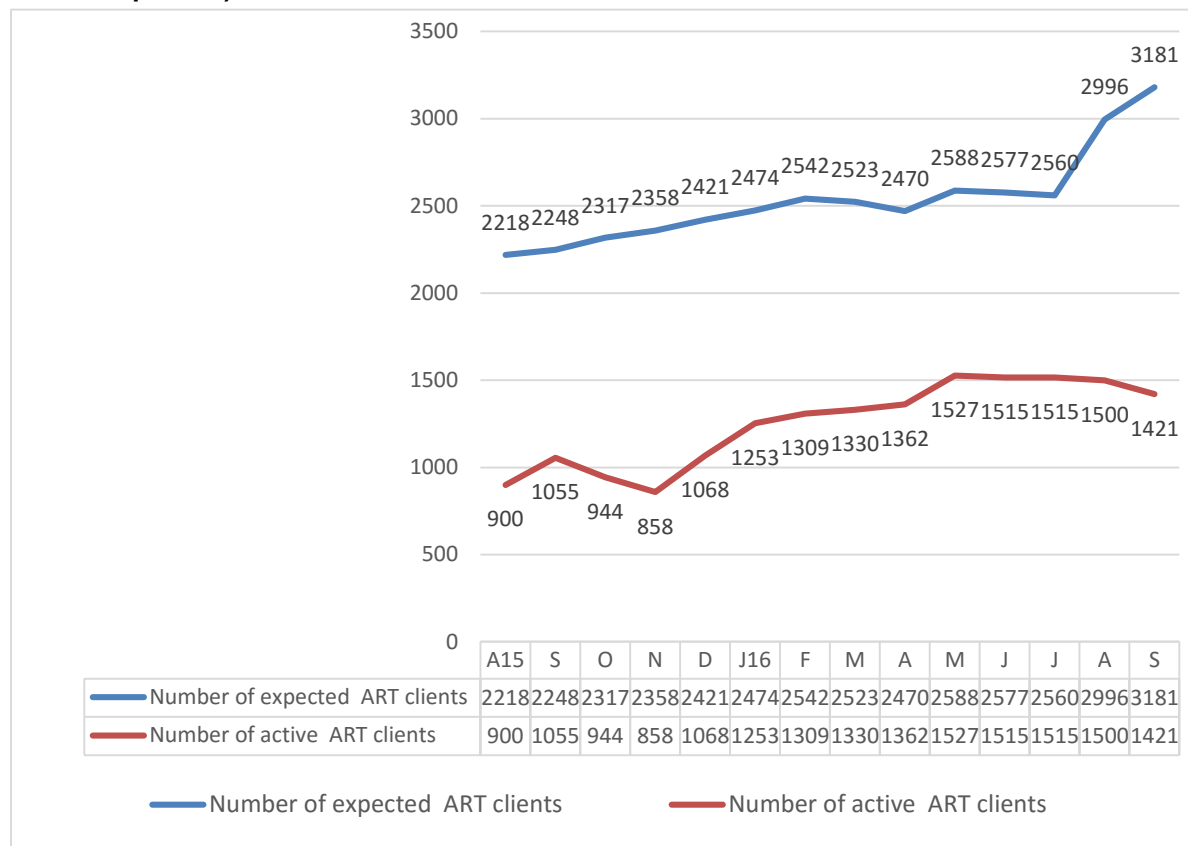
- **Organized a meeting with PROVIC/PATH to reinforce partnership on QI activities in colocation facilities** (June 2016). ASSIST provided feedback on PROVIC/PATH's annual work plan for the period from April 1, 2016 to March 31, 2017, mainly concerning QI activities.
- **Conducted the first learning session in each province: Lualaba, Kinshasa, and Haut Katanga** (July, Aug 2016). A total of 170 participants including QI teams' members, managers from Health Zones, health provincial divisions, National AIDS Control Program, National Multisector AIDS Control Program, implementing partners (PATH and MSH) participated in the session. A gender specialist from ASSIST HQ participated in the Kinshasa learning session to discuss integrating gender in QI. Results were presented on reducing ART coverage and retention gaps in each province. The best QI team was identified. A "synthesis of successful changes" was developed for hospitals and health centers.
- **Figure 16** shows the percentage of PLHIV retained on ART in three provinces in 39 sites. This is the first time that a time series was plotted to show gaps in retention. Discussions among providers and between patients and providers found many reasons clients did not return for services: poor treatment at the facility, stock-out of drugs, and insufficient data requiring considerable improvement. Examples of changes introduced included data audit, patients' files updated regularly, and identifying a person in charge of information and documentation.

Figure 16. DRC: Percentage of PLHIV retained on ART, Lualaba, 11 sites (Aug 2015 - Sept 2016)



- Figure 17** shows the evolution of the gap retention in the province of Lualaba. Since the launch of the collaborative, there was better documentation and tracking of patients on ART. However, from July to Sept 2016, the number of expected ART clients increased significantly but the number of active ART clients decreased.

Figure 17. DRC: Number of expected and active ART clients, 11 sites, Lualaba Province (Aug 2015 – Sept 2016)



Activity 2. Build capacities at all levels in QI and related health system strengthening

OVERVIEW

ASSIST actively continued to engage national policy makers, provincial, and Health Zone managers in all phases of the improvement work. ASSIST began to support and train Health Zones, Province, and central levels supervisors and managers not only on coaching techniques but also on sustaining and institutionalizing improvement into the DRC health system.

MOH managers and coaches at different levels of the health system, with support from ASSIST, are responsible for implementing plans for improving quality of all of the target services. Each QI team was provided with sufficient support so that they are able to conduct improvement activities independently of ASSIST staff members to address ongoing technical and systems level gaps. Building capacity from lessons learned and from the institutionalization of these practices is strengthening the health system at all levels and providing information and evidence to inform strategic planning at the Health Zone, provincial, and central levels.

To ensure the quality of data, ASSIST provided monthly technical support to data validation at facility, and Health Zone levels. Once a quarter, this support was also provided to the provincial and central levels. ASSIST is also providing technical support to the MOH General Secretariat to develop a draft document on DRC National QI Policy and strategies.

KEY ACCOMPLISHMENTS AND RESULTS

- **Provided QI and knowledge management training to key MOH staff including Health Zone and provincial managers/supervisors/coaches** (Nov 2015). These staff participated in

developing the aims, indicator, and provisional content package. The objective of the training was to orient participants on their future role as coaches:

- Some key staff from the MOH were also used to review the baseline assessment results prior to being shared with larger groups
- A total of 40 individuals from all targeted Health Zones and provincial managers and supervisors were oriented on QI collaborative in line with the baseline results. They were also oriented on general roles following coaching visit.
- **Organized a three-day workshop in orientation of HIV collaborative coaches** in Haut Katanga (February 11-13, 2016) and Kinshasa (February 17-19, 2016). The objective was to reinforce the capacities of 85 MOH managers at all levels and ASSIST DRC technical advisors on coaching techniques. The two workshops were facilitated by the Senior Improvement Advisor from the ASSIST regional office for Francophone Africa and the ASSIST Resident Advisor in DRC.
- **Conducted an improvement seminar to engage the MOH particularly the central level on how to lead a reflection on the quality improvement** (March 10, 2016). ASSIST Director, Dr. Rashad Massoud conducted the seminar which was attended by MOH director of planning, MOH director of primary health care and Health information-QI unit, PNLs, PNMLS, USAID, CDC, ProVIC, PROSANI, FHI, EGPAF, and ASSIST DRC staff. All participants displayed strong commitment and interest in improvement.
- **Supported the HIV/AIDS 2015 annual review organized by the National AIDS Control Program** (April 2016) by printing documents.
- **Provided technical and administrative support to the 2016 annual work plans of Haut Katanga and Lualaba provinces** (April 2016). ASSIST ensured that the work plans integrates QI activities.
- **Organized monthly internal data analysis meetings in each facility and provided technical assistance on data validation at Health zone and provincial levels** (April, May, June 2016). To improve the quality of data, ASSIST is providing technical and administrative support to facilities to organize monthly meetings. The aim of the meetings is for facilities to internally analyze data for reliability and consistency with patient register records. Data were analyzed in 39 sites by QI team members, ASSIST, and Health Zone coaches before their validation at the Health Zone and provincial levels.
- **Organized an experience exchange meeting** (July 2016). The meeting took place in Uganda between the DRC MOH delegation and the Uganda MOH Quality Assurance Department (QAD). QI integration in the Uganda health system and ART framework implementation by ASSIST in Uganda were discussed. ASSIST is providing technical, financial and administrative support to the MoH to develop or update QI tools and to organize annually the national QI meeting. This valuable experience was shared during a feedback meeting at the MOH national level (July 2016).
- **Organized the first coaches' meeting in Kinshasa, Haut Katanga and Lualaba between the MOH, ASSIST, MSH and PATH coaches** (July- August 2016). The objective of this meeting was to evaluate the coaching visits that had been conducted by identifying strengths and weaknesses and learn how to improve coaching visits by providing technical guidance to QI teams to test changes and to document them.

IMPROVEMENT IN KEY INDICATORS

Activity	Indicators	Baseline, Aug 2015	Sept 2016
HIV Gaps Framework	% of coverage gap in target area	Not available	63.4%(n=1421), in 11 sites in 1 province
	% of retention gap		
	% of wellbeing gap		
Counseling / screening	% of target key population counselled, tested and received their results	Not available	99.9%(n=188), 2 sites in one province

Activity	Indicators	Baseline, Aug 2015	Sept 2016
	% of male partners counselled and tested	20%, 39 sites in 3 provinces	20.6%, 10 sites in one province
Linkage and initial assessment	% of individuals tested HIV+ and enrolled in a month of identification	11.7% (n=1048), 39 sites in 3 provinces	82.8%(n=116), 10 sites in one province
Pre-ART	% of patients eligible for ART at initial assessment who received CD4 count within six months	26.2% (n=571), 39 sites in 3 provinces	6.3%(n=95), 10 sites in one province
ART	% of HIV-positive patients on ART lost to follow-up	35.2% (n=661), 39 sites in 3 provinces	2.5%(n=1962), 10 sites in one province
TB	% of HIV-positive patients screened for TB	35.6% (n=661), 39 sites in 3 provinces	72.4(n=1575), 10 sites in one province

GENDER INTEGRATION

Baseline assessment data were sex-disaggregated, but were not analyzed to identify gender-related gaps and issues, and so no such analysis was not incorporated into the “Aims, Indicators and Content” packages. Activity data are also collected sex-disaggregated, with some analysis and gender-related change ideas tested. This includes that one facility QI team added clinic hours on Saturday and Sunday afternoons in an effort to increase HIV testing for males, because they learned that males tended to be at work and unable to visit the clinic during its normal weekday hours; the additional weekend hours are not male-only, just meant to be friendly to males who work during normal business hours during the week. QI teams measured male partner involvement in ANC through HIV testing, and found it to be low everywhere. ASSIST staff believe that stigma and discrimination are large contributors to PLHIV not accessing and being retained in care; there is anecdotal evidence that stigma and discrimination are worse from health providers and in health facilities than in communities. The stigma and discrimination include that PLHIV are blamed for their HIV and that pregnant women with HIV are particularly stigmatized and discriminated against. ANC clinics invite male partners to accompany pregnant women to the clinic through phone calls and letters; ASSIST continually reiterated that such invitations should only come with the consent of the pregnant woman and her HIV status should never be shared without her consent; some clinics invite all male partners regardless of the pregnant woman’s wishes, but ASSIST did not learn of any providers disclosing the woman’s HIV status without her consent. All clinics counsel HIV+ pregnant women on the importance of inviting/involving their male partners to the clinics, and all clinics counsel HIV+ clients to share their status with their partner and/or another person for support. Clinics also encourage/counsel male partners on HIV testing when they come to the facility after delivery to see the mom and baby.

ASSIST Gender Specialist Julia Holtemeyer of WI-HER, LLC participated in the Kinshasa Learning Session held in August 2016, to discuss what gender integration is and how to integrate gender into quality improvement activities. The components of the 3 hours of training included defining gender and related concepts; defining gender analysis; understanding how to develop, analyze, and report on sex-disaggregated data and gender-sensitive indicators; and the importance of identifying and addressing and gender-sensitive program planning. All training materials were in French, and Ms. Holtemeyer conducted the training in English, with translation into French. Activities included completing a driver diagram; discussions about gender norms in DRC; discussions about how gender affects HIV transmission, testing, care, treatment, and adherence to and retention in care; discussions about how gender is relevant to the ASSIST DRC QI work; and slide presentations explaining the ASSIST approach to gender integration. Participants were initially hesitant to answer questions and volunteer their opinions, but quickly became more vocal and engaged as the discussion turned to gender norms in DRC and how they affect HIV improvement work.

SUSTAINABILITY AND INSTITUTIONALIZATION

ASSIST strengthened the capacity of MOH staff at all levels, including national policy makers, and provincial and Health Zone managers. The intervention has led to identifying key structures within the MOH, including HIV, quality improvement (QI), planning, and health information, to launch discussions on QI institutionalization. Explicit discussions were conducted during management meetings, coaches' meetings, and learning sessions on what changes or management reorganizations were needed to maintain gains over time. ASSIST worked to strengthen the capacity of the MOH at national and health zone levels to continuously support these changes and to strengthen the capacity of the MOH at national and Health Zone levels to be able to plan and implement sustainable changes in the system.

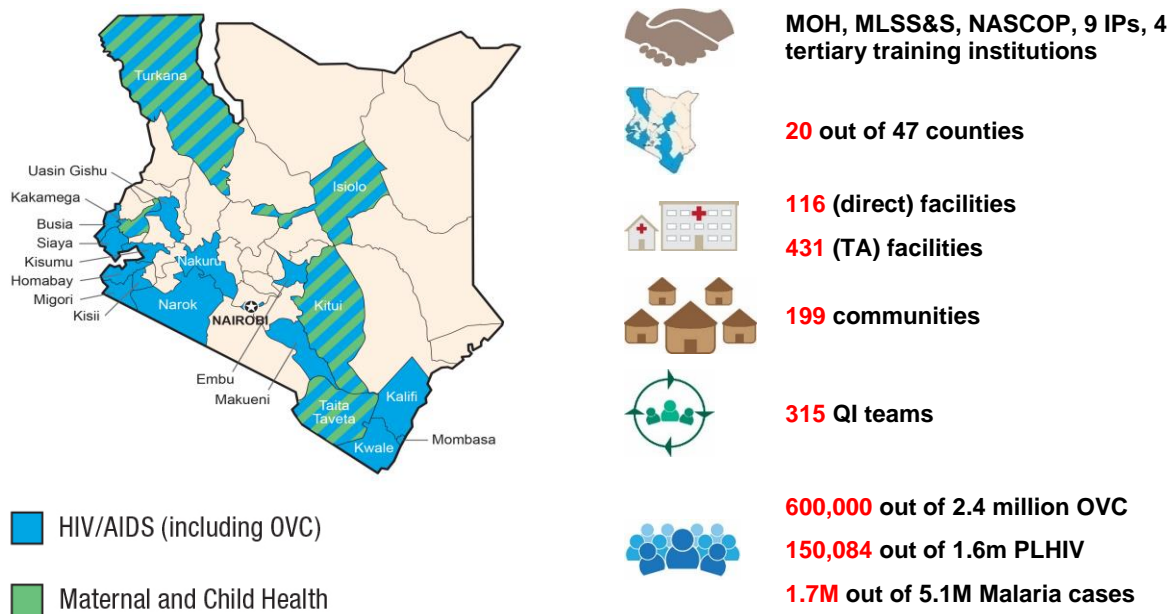
KENYA

BACKGROUND

The USAID ASSIST Project began working in Kenya in October 2012, building on the work of the USAID HCI Project. In Kenya, ASSIST supports the Ministry of Health; the Ministry of Labor, Social Security and Services (MLSS&S); the National AIDS and STI Control Program (NASCOP); USG implementing partners; and county governments to design, develop, and implement strategies that will enhance the quality of health service delivery. ASSIST works to improve programs and services related to: maternal, newborn, and child health (MNCH) and reproductive health to reduce maternal and neonatal deaths; malaria to improve case management and strengthen the national program; HIV care and treatment; and the care of orphans and vulnerable children (OVC) in the country in order to support PEPFAR 3.0 goals.

The project design for ASSIST Kenya is divided into two phases: Phase 1 (January 2013-March 2014) involved the development of national frameworks to support institutionalization of QI as well as developing change packages through the centers of excellence (COEs) in order to summarize and communicate change ideas that can be scaled up across Kenya. During Phase 2, starting in April 2014 until now, ASSIST began the scale-up of QI as well as completion of the national frameworks for institutionalizing improvement.

Scale of USAID ASSIST's Work in Kenya



PROGRAM OVERVIEW

What are we trying to accomplish?	At what scale?
1. Country ownership and institutionalization of QI at the national level: Support operationalization of a national QI policy and the development of quality structures at county level in collaboration with the Directorate of Health Standards, Quality Assurance and Regulations, County Health Departments, and other key stakeholders.	
<ul style="list-style-type: none"> A quality management system supported by all technical departments A standards and guidelines clearing group established 	<ul style="list-style-type: none"> National
<ul style="list-style-type: none"> Define and devise policies, strategies and institutional structures for quality, including support for county efforts to set up QI Units with designated persons, organogram, defined roles and responsibilities and funding 	<ul style="list-style-type: none"> 4 counties – Kisumu, Kwale, Taita Taveta, and Busia counties
<ul style="list-style-type: none"> Conduct Quality TWG meetings on a quarterly basis 	<ul style="list-style-type: none"> 4 counties – Kisumu, Kwale, Taita Taveta, and Busia counties
<ul style="list-style-type: none"> Protect the rights of patients and their families to health service: Improve patient experience and satisfaction with health services through surveys, exit interviews, suggestion boxes, Patients’ Rights Charters 	<ul style="list-style-type: none"> 4 counties – Kisumu, Kwale, Taita Taveta, and Busia counties
<ul style="list-style-type: none"> Integrate QI concepts into pre-service curriculum training in 4 select tertiary training institutions 	<ul style="list-style-type: none"> 4 tertiary training institutions – KMTTC, Moi, KEMU, and University of Nairobi
2. HIV care and treatment and elimination of mother-to-child transmission of HIV (eMTCT): Support Ministry of Health and APHIAs to apply QI techniques to strengthen and improve the HIV chronic care model and to bring and retain more adults and children in HIV care and ensure better outcomes for PLHIV	
<ul style="list-style-type: none"> Improve HIV care and treatment in the Continuum of Response (COR) and to bring and retain more people in HIV care and treatment 	<ul style="list-style-type: none"> 5 counties – Kwale, Kakamega, Uasin Gishu, Turkana, and Busia 9 USG partners (5 in the 4 counties, 5 as above-site TA) 54 sites for core HIV facilities
3. MNCH/reproductive health (RH): Provide TA to APHIAs to apply QI methods and techniques to improve and strengthen maternal, neonatal, and child health and RH services in Kenya	
<ul style="list-style-type: none"> Improve and strengthen MNCH/RH services 	<ul style="list-style-type: none"> 5 counties – Isiolo, Taita Taveta, Kitui, Kakamega, and Turkana 5 USG partners 46 sites
4. Malaria case management: Provide TA to APHIAs to apply QI techniques to improve and strengthen malaria prevention, case detection and management among pregnant women and children	
<ul style="list-style-type: none"> Improve malaria case management 	<ul style="list-style-type: none"> 3 counties- Siaya, Kakamega, Busia 25 sites direct, above site 403

What are we trying to accomplish?	At what scale?
5. OVC and child protection (national level): Strengthen systems at national level to support the institutionalization of QI in child protection and OVC to improve the welfare of children	
<ul style="list-style-type: none"> Strengthen systems within the national government to support institutionalization of QI in child protection and OVC 	<ul style="list-style-type: none"> National
6. OVC and child protection (county level): Strengthen systems within the county governments to support the institutionalization of QI in child protection and OVC to improve the welfare of children	
<ul style="list-style-type: none"> Strengthen systems within the county government to support institutionalization of QI in child protection and OVC 	<ul style="list-style-type: none"> 5 counties: Nakuru, Migori, Embu, Mombasa, and Uasin Gishu
<ul style="list-style-type: none"> Build the capacity of USAID implementing partners to institutionalize QI at the point of service delivery 	<ul style="list-style-type: none"> 8 counties: Narok, Kisii, Mombasa, Uasin Gishu, Siaya, Migori, Embu, and Makueni



Improvement Activity



Cross-cutting Activity

Activity 1. Country ownership and institutionalization of QI at the national level

OVERVIEW

In FY16, ASSIST continued to support the MOH to draft the Kenya Health Quality Improvement Policy (KHQIP) 2015-30, to fulfil the principles set forth in the Constitution of Kenya 2010 to attain the highest standard of health in a manner responsive to needs of the population.

KEY ACCOMPLISHMENTS AND RESULTS

- **Supported the MOH at national and county levels to institutionalize the Health Quality Improvement Policy (2014 – 2016):** URC supported MOH and stakeholders to develop the draft Kenya Health Quality Improvement Policy in order to foster quality accountability within the 47 county governments (Q1). The policy was completed and submitted to MOH, although it has yet to be signed off.
- In May 2016, URC supported MOH to define and develop quality structures in five counties (Busia, Kakamega, Kwale, Taita Taveta, and Kisumu) including a QI unit with named accountable persons, an organogram and a work plan of activities.
- **Supported the review of the KQMH guidelines and checklists (Q1 to Q4 of 2016):** URC supported MOH and stakeholders to review and pilot the KQMH standards and checklists that will be used to support: a) self-assessments by health facilities; b) certification and accreditation of health facilities.
- **Supported the completion of the Evidence Based Medicine web portal (Q1):** The web portal was finalized and handed over to the Ministry of Health, and is run and managed by them. A national guidelines review committee was inaugurated with ASSIST as a member, to review and adopt guidelines for onward upload to web-based portal.
- **Supported Quality Management technical working group meeting (Sept 2016).**
- **Supported the MOH in launching ISO certification (July 2016).**

Activity 2. HIV care and treatment and eMTCT

OVERVIEW

ASSIST is providing support to the MOH and APHIAs to improve the quality of care by employing the chronic care model, enrolling and retaining more adults and children in HIV care, and ensuring better outcomes for PLHIV. ASSIST has already supported large-scale rollout of QI across 32 counties and trained a critical mass of IPs, health managers, and frontline health workers. In FY16 ASSIST provided structured post-training TA to the MOH and APHIA plus on QI at scale. ASSIST will continue to provide in-depth support in four selected counties with the objective of concretizing innovative

ideas that can be adopted in the rest of the trained counties. In Q2, county engagement meetings for start-up of QI activities took place in Turkana and Uasin Gishu counties. In Kakamega County, a lot of the facility-level coaching has occurred informally due to delayed consensus with the County Health Management Team (CHMT) on ASSIST support for HIV QI activities within the county.

KEY ACCOMPLISHMENTS AND RESULTS

- **Handover of QI activities in Nairobi County to Afya Jijini (Q1).** Following the award of Afya Jijini, ASSIST handed over all QI activities within Nairobi County to the incoming partner. Uasin Gishu and Turkana counties replaced Nairobi for ASSIST's QI support from October 2015.
- **QI training for Uasin Gishu County health workers:** Initial contact with Uasin Gishu County through AMPATH Plus, the main USAID-funded IP, saw a request to train the county on QI. A QI training was then held on 8th-11th December. A total of 49 participants from 20 facilities were trained.
- **ASSIST scope of work review meetings with CHMTs** held in Kakamega, Uasin Gishu, and Turkana counties (Feb 12, 22, and 29, 2016, respectively). The purpose of these meetings was to share the ASSIST work plan for the quarter and develop a county-specific QI work plan with the team.
- **County HIV technical working group meeting held in Kakamega County** (Feb 18, 2016). Terms of reference of the TWG shared with the team for ratification. The team agreed on three priority areas for the county: 1) HIV testing services (HTS) with a focus on identification of HIV-infected children; 2) EID coverage and retention of HEIs; and 3) Viral load coverage and suppression. ASSIST is also pursuing integration of the HIV TWG into the already existing Accelerating Children's HIV/AIDS Treatment Initiative (ACTS) TWG. The inaugural HIV TWG for Uasin Gishu County was held in March 2016.
- **Monthly QI coaching for Kwale, Kakamega, and Uasin Gishu counties (Q1-Q4).** ASSIST regional advisors provided mentorship and coaching to four of the priority facilities in Kakamega: Lumakanda, Malava, Mukunga, and Kakamega County General Hospital during the month of February 2016. In Uasin Gishu County, the AMPATH Plus technical team continued to provide QI coaching to six priority facilities. In Kwale County, four coaching visits have been conducted by the MOH QI coaches. All 16 facilities have QI work plans and are showing progress.
- **Supported QI coaches' meetings to discuss mentorship challenges and coaching, and progress in QI indicator performance in Busia, Kwale, and Turkana counties** (July and Aug 2016)
- **Kwale PHFS learning session held at Hill Park Hotel, Tiwi** (Feb. 4-5, 2016). The objectives of the meeting were: 1) to share, discuss and develop change ideas for improving quality of eMTCT services; 2) to share and discuss challenges and feasible solutions; 3) to harvest improvement stories and ideas for documentation and scale-up; 4) to develop a clear improvement agenda for each work improvement team (WIT) for the next cycle; and 5) to discuss scale-up of PHFS activities in Kwale County. It also provided an opportunity to prepare for the global PHFS meeting. It was evident that the WITs were not functional and there was minimal ownership of data by the facilities, as a result of high staff turn-over and no coaching activities. This has been mainly due to absence of a regional advisor to support the improvement work. A clear way forward was agreed on.
- **Global PHFS meeting held in Dar es Salaam, Tanzania bringing together the six countries implementing PHFS initiative to share best practices and discuss in-country opportunities for scale up** (Feb 9-10, 2016).
- **AMPATH Plus QI best practice sharing meeting bringing together several facilities across 8 counties to share various quality improvement projects** (March 29 - April 1, 2016).
- **ASSIST supported HIV TWG meetings in Kakamega, Kwale, and Uasin Gishu counties** (May 27, April 2, June 23).
- **Introduced the new QI Officer to the County and APHIA teams who will be supporting APHIA imarisha QI implementation in Turkana** (May 2016). In June 2016, ASSIST conducted initial county engagement and QI sensitization meetings in Turkana county (June 2016). This was

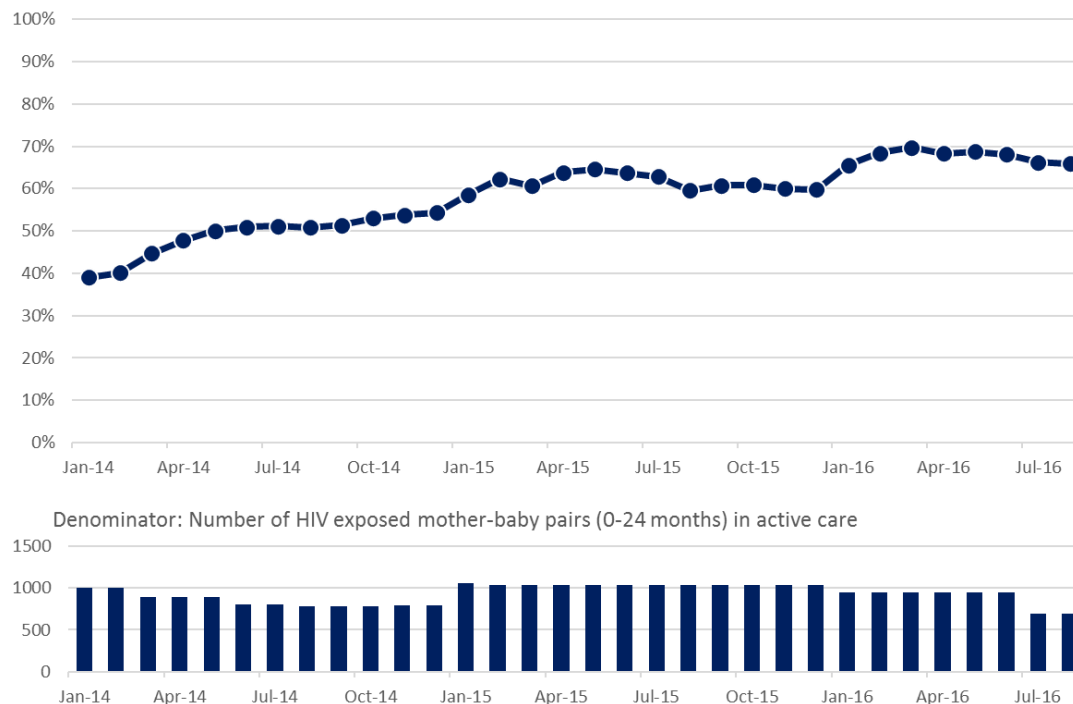
followed by a QMH training in Turkana county (June 27 - July 1, 2016). ASSIST supported formation of Work Improvement Teams in 7 facilities¹ in Turkana County (July – Sept 2016).

- **Supported seven QI CMEs** (1 - Kakamega, 1- Busia, 4 - Kwale and 1 - Turkana Counties (July – Sept 2016).
- **Conducted QI data validation in 12 facilities² in Kwale County** (July 2016).
- **Supported Kwale County PHFS Learning Session** (Sept 2016).
- **Participated and provided technical input in the National and Regional eMTCT Framework 2016-2021 development and validation meetings** (Aug – Sept 2016).
- **ASSIST supported a National Nutritional and HIV Technical Working Group, where preliminary data from the patient self-management activity was shared** (Sept 2016).

Results

- The percentage of HIV-exposed mother-baby pairs (0-24 months) in active care at 16 sites has increased from 39% in January 2014 to 66% in August 2016 (**Figure 18**).
- The percentage of HEI tested for HIV by 3 months of age with documentation of first PCR results at 16 sites has increased from 27% in January 2013 to 89% in August 2016 (**Figure 19**).

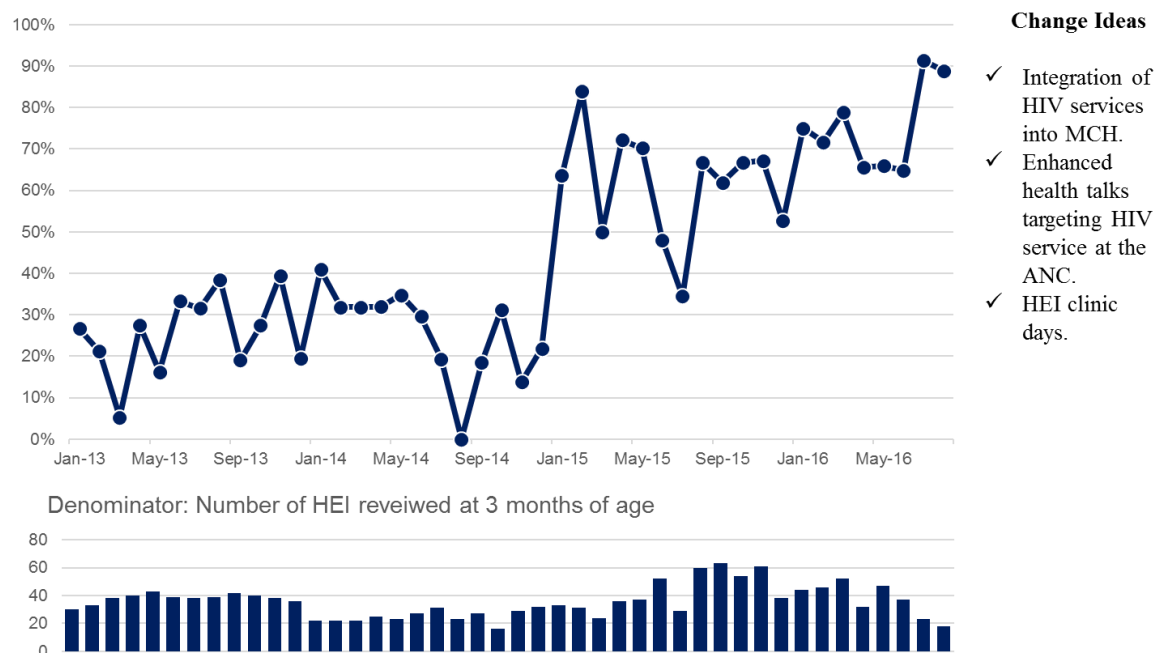
Figure 18. Kenya: Percentage of HIV-exposed mother-baby pairs (0-24 months) in active care, 16 sites, Kwale County (Jan 2014 – Aug 2016)



¹ 1 AIC Kalokol, St. Mary's Kalokol, Namakuse dispensary, Elelea Health Centre, Lokori dispensary, Katilu Sub-county Hospital and RCEA Lokori Health Centre

² Ng'ombeni dispensary, Waa dispensary, Diani health centre, Msambweni County Referral Hospital, Kwale Sub-county hospital, Lunga Lunga Sub-county hospital, Vanga dispensary, Kikoneni health centre, Taru dispensary, Samburu health center, Lutsangani dispensary, Kinango Sub-county hospital.

Figure 19. Kenya: Percentage of HEI tested for HIV by 3 months of age with documentation of results (1st PCR), 16 sites, Kwale County (Jan 2013 – Aug 2016)



Summary of the change ideas implemented include:

- Integration of HIV services into MCH making it a “one-stop shop” for the mother and her HEI.
- Introduction and use of a ‘Tickler Box’. This is simple method where at the beginning of every month, files for all mothers due for a visit are placed in one box. As the mothers meet their appointment, the files are moved to a second box. At the end of the month, the files left in the initial box are those for mother-infant pairs who did not come for their monthly visit. This prompts tracing of the mothers by community health volunteers or mentor mothers.
- Immediate initiation of HAART for positive-pregnant women
- Enhanced health talks targeting HIV services at the ANC
- Psychosocial support groups
- HEI clinic days
- Utilization of mentor mothers to provide psychosocial support to HIV-infected pregnant and breastfeeding women. They also contact and trace missed appointments.
- Enhancing male involvement through use of partner invitation cards and using community resource persons (chiefs and other influential persons) to advocate for male involvement and influence men to accompany their pregnant partners to the clinic.
- HEI graduation days which provide an opportunity to celebrate mother-infant pairs who have completed 24 months of PMTCT follow-up.
- Inclusion of Village Saving and Loan Association (VSLA) in the client support groups
- Creation of a mother-infant pair specific activity calendar which is inserted on the inner cover of the mother’s file and displayed on the clinic wall marking dates when each infant is scheduled for tests as per the EID algorithm: Waa Dispensary, Shimba Hills HC.

Activity 3. MNCH/RH

OVERVIEW

ASSIST continued with efforts to enhance the capacity of county governments and other USG partners to apply QI techniques to improve and strengthen MNCH and reproductive health services in Kenya. This was done through: a) building the capacity of the county governments to have effective QI management structures; and b) direct support for low-cost evidence based interventions while applying effective QI approaches at facility level. The main focus for this activity remains:

- Tracking of process and outcomes in the provision of quality essential and obstetric services
- Tracking of process and outcomes in essential neonatal care services
- Provision of family planning (FP) services at the facilities to reduce the service gap in FP uptake
- Tracking the capacity of quality improvement teams in maintaining service quality while scaling up good practices either in other units in the same facility or to other facilities

KEY ACCOMPLISHMENTS AND RESULTS

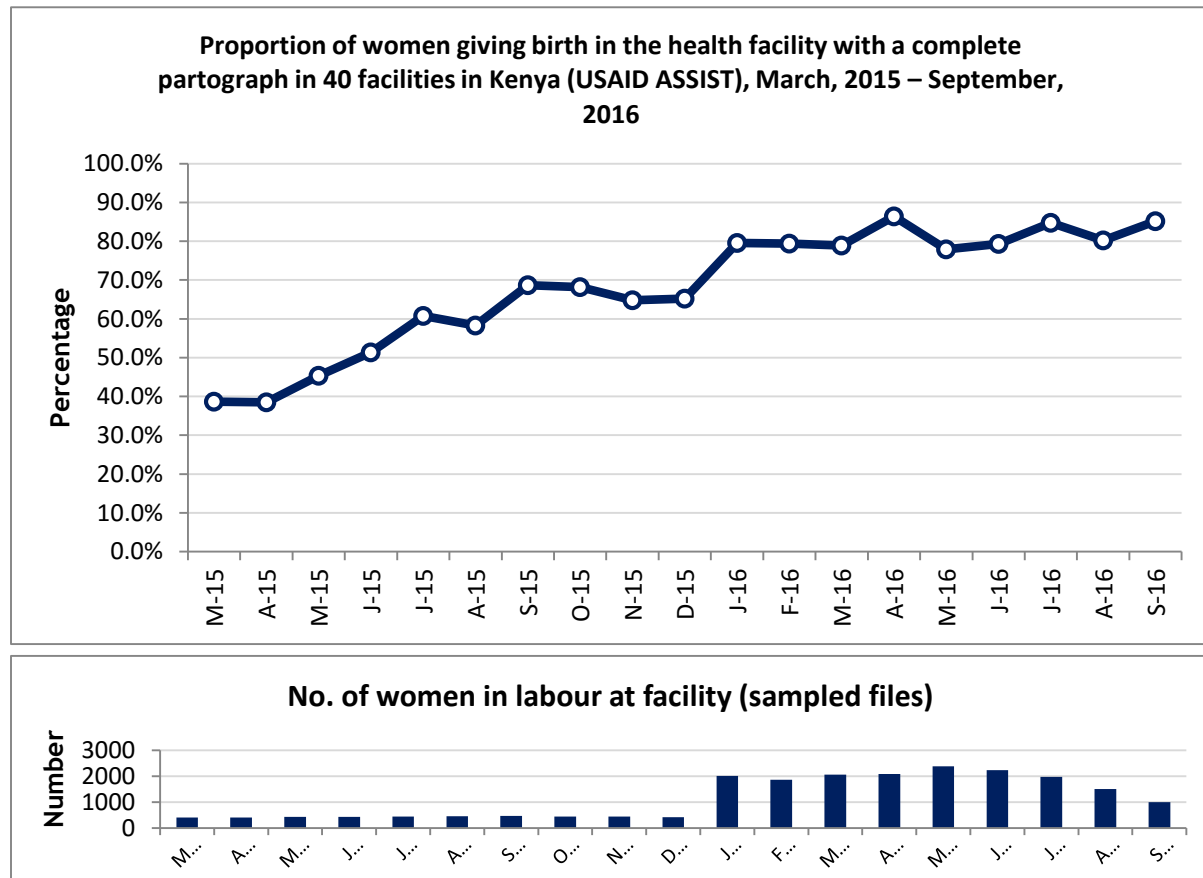
- **ASSIST supported four counties (Kitui, Isiolo, Kakamega, and Taita Taveta) to establish county-level Technical Working Groups that meet once every quarter bringing together all partners supporting MNCH/RH/FP activities at the county level (Q2 to Q4).** This is an important structure that guides general implementation of health services and a good forum to highlight the impact of QI to other service providers.
- **Support for coaching activities (Q1 to Q4).** In specific county activities, ASSIST worked closely with the county governments and the APHIAs in planning for 2016 activities, which include monthly coaching visits. Despite running different budget calendars from that of ASSIST, all the APHIAs have added QI as part of their 2016 plans and provided operational budgets for some of the activities.
- **ASSIST together with APHIA plus Kamili conducted a comprehensive assessment of the QI Teams in Kitui County (Jan 2016).** It showed that despite the teams having been formed almost at the time, they were at different levels of maturity. There is need to put extra effort in raising up struggling teams.
- **During a review of the health care service delivery standards that USAID ASSIST is spearheading, it was agreed that the WHO Safe Childbirth Checklist be one of the critical tools to be used at all facilities for assessing the level of quality of services during the childbirth process.** Workshops to review quality of childbirth care were held in January and March 2016.
- **Provision of FP services immediately after delivery or before a woman is discharged from a facility:** This is a new indicator of focus for the teams, and ASSIST is still at the discussion stage with the respective county health teams on how best to track it. Largely underrated in the developing world, FP is one of the strongest pillars of MNCH care and is an important component in reduction of poor maternal and child health outcomes. Following discussions held with the USAID Kenya technical team in March 2016, ASSIST will share a family planning focus plan in Q3 that encompasses critical FP service improvements.
- **ASSIST held consultations with RH coordinators from five counties and agreed that ASSIST will support FP service outputs at the MCH clinics through QI approaches (March 2016).**
- **Revision of the FP QI strategies in 10 facilities in 5 counties (April and May 2016).**
- **Tested the use of the WHO Safe Childbirth Checklist at the request of the national MoH; now part of monitoring tools in essential maternal and newborn care (Q3).**
- **Participated in review of the maternal newborn national assessment tool; part of the bi-annual assessment of facilities' readiness to provide essential obstetric and newborn care (Q3).**
- **Conducted learning session, as scheduled, on RHMNCH/FP to advise on the spread of the improvement concepts to other facilities (Isiolo in Aug 2016 and Kitui in Sept 2016)**
- **All the six counties (Isiolo, Kakamega, Turkana, Taita Taveta, Kitui, and Busia) supported by ASSIST were supported to meet through inter-county exchange programs (Aug and Sept 2016).** These were done through the two learning session in Kitui and Isiolo. The purpose of the peer-sharing forums was to encourage and influence each other on how to improve care in their own counties.
- **Presented a poster on improvement work in neonatal care at the Quality and Safety International Forum in Singapore (Sept 2016).**

- **Ten midwives from five counties were supported by ASSIST to present their experiences at the East, Central and Southern Africa Conference on Midwives held in Nairobi (Sept 2016).**

Results:

- **Use of partograph in monitoring labor.** This has been the hallmark of process indicators to look at the quality of intra-partum care at facilities supported by ASSIST. Increase in the use of partograph for monitoring of labor in government facilities from 39% in March 2015 (7 sites) to 85% (40 facilities) by Sept 2016 (see **Figure 20**). Use of the WHO partograph is an important part of management of obstetric emergencies in facilities.

Figure 20. Kenya: Monitoring of labour using partograph, 40 facilities (Jan 2015-Sept 2016)

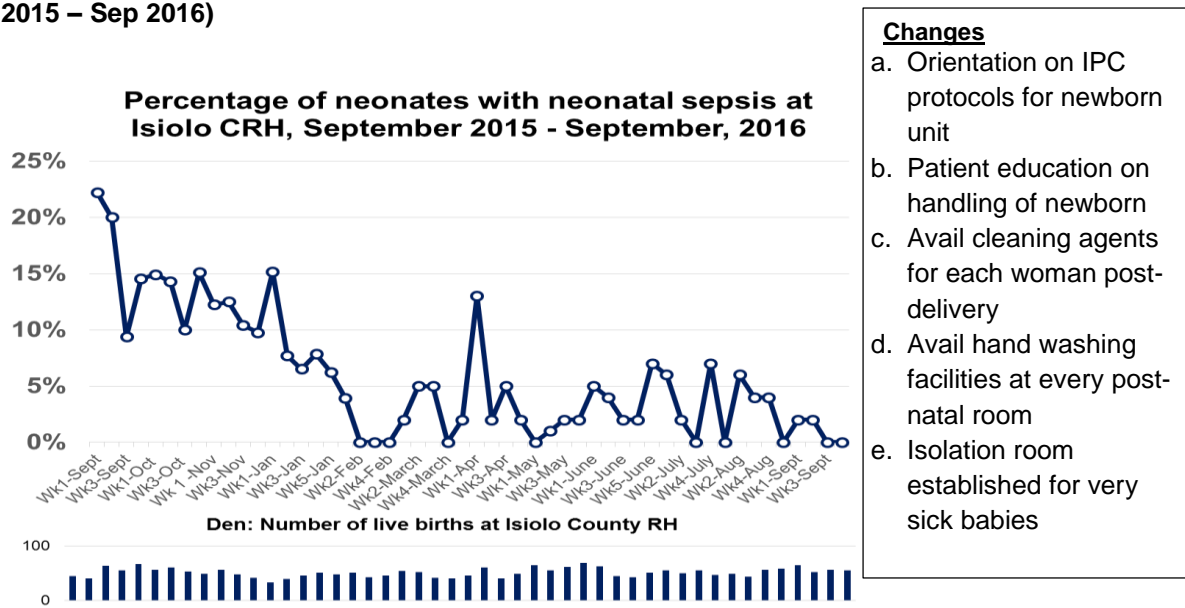


- **Administration of Vitamin K to newborns.** The current national guidance provides that all newborns are given an injection of Vitamin K for prevention of bleeding in newborns. Although the supplies have been available in all the facilities that ASSIST supports, this is not often provided for every baby born. ASSIST worked with three facilities to look at how to counter the low performance. The gap attributing to low performance at the facility was identified to staff apathy in administering the drug as per guidelines. On-the-job continuous education sessions were given focusing on the benefits of Vitamin K in newborns.
- **Screening for anemia at the first antenatal visit:** This new indicator was introduced at 10 facilities in two counties to look at provision of the minimum package of services at a county or sub-county hospital. The ten facilities were selected based on their capacity to offer all the laboratory investigation required at the first ANC visit. There was nominal improvement on this indicator from 73% (July 2015) to 79% (Feb 2016).
- **Improving newborn care.** This is a continuation of work done since October 2015 with Isiolo County Hospital to sustain the gains made and also use the results as a showcase for a focused

approach in achieving results through simple, basic changes. Some changes that have been implemented and led to improvements (shown in **Figure 21**) include:

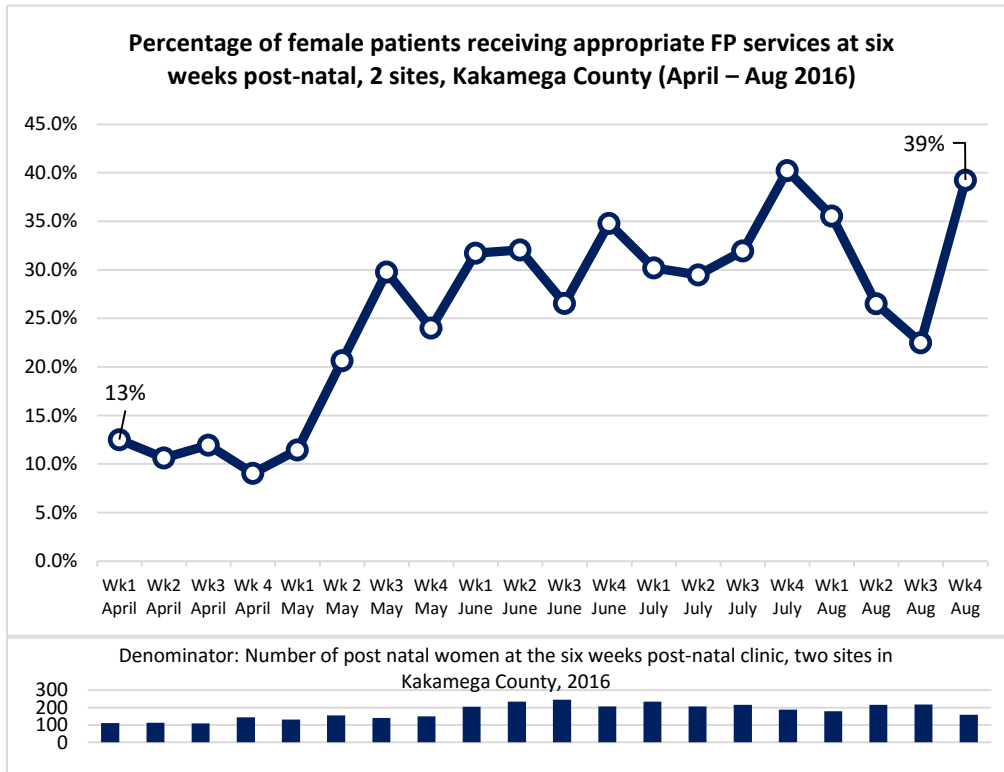
- Orientation on infection prevention and control protocols for newborn unit
- Patient education on handling of the newborn
- Avail cleaning agents for each woman post-delivery
- Avail hand wand washing facilities at every post-natal room
- Isolation room established for the very sick babies
- As shown in **Figure 21**, Isiolo County Hospital has improved from a high of 22% of live births being retained for treatment of sepsis to a median of 5% in less than one year. This may not continue to be tracked every week as the facility looks at other care processes to track, but periodic assessments (at least quarterly) will be instituted to keep track of this critical indicator.

Figure 21. Kenya: Percentage of neonates with neonatal sepsis, Isiolo County Hospital (Sept 2015 – Sep 2016)



- **Improving family planning uptake.** A review of FP service delivery and root cause analysis was done in April 2016 to look at the causes of low uptake of family planning in two sites in Kakamega County (**Figure 22**). Because of the heavy workload, which at times is brought on by disorganized work areas, attention is mostly given to babies' immunization during the postnatal clinics, and FP is left as an opt-in service. Changes tested include a revision of client flow to reduce waiting times. There was also a focus on continuous education on appropriate FP counselling at antenatal clinic and postnatal wards. Generally, health care workers do not go through the whole counselling process at entry point for FP services. Other implementing partners have been supportive through provision of the FP commodities to allow for service continuity. The challenge remains in facilities funded by faith-based organization where religious doctrines do not allow for modern FP methods.

Figure 22. Kenya: Percentage of female patients receiving appropriate FP services at six weeks post-natal, 2 sites, Kakamega County (April – Aug 2016)

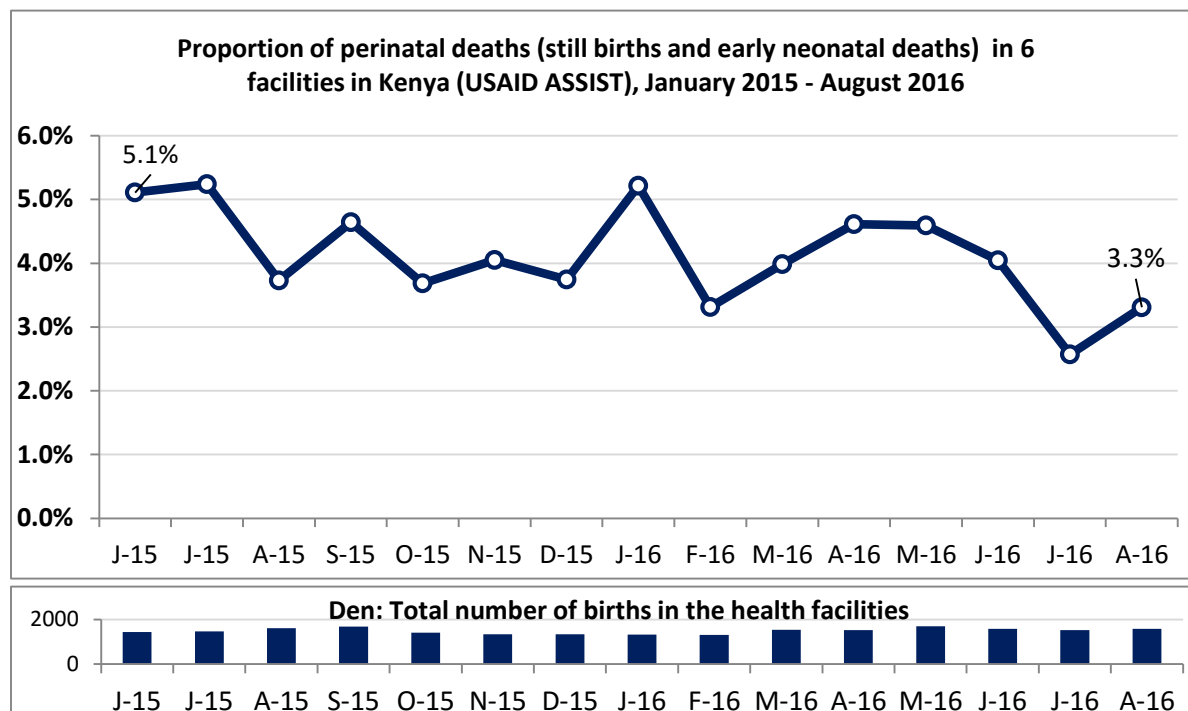


Change Ideas

- Revised client flow to minimize waiting time
- Enhanced health talks targeting HIV services at the ANC
- CMEs on FP counselling at post-natal ward

- **Tracking perinatal deaths.** The referral facilities in the five focus counties (Kitui, Lodwar, Kakamega, Isiolo, and Moi Voi) receive the most clients and offer comprehensive emergency obstetric and newborn services (**Figure 23**). Outcomes from these facilities are a good measure of the counties' preparedness for emergency detection and response. By tracking these outcomes, ASSIST will demonstrate impact of the different QI approaches to reduce maternal and newborn mortalities.

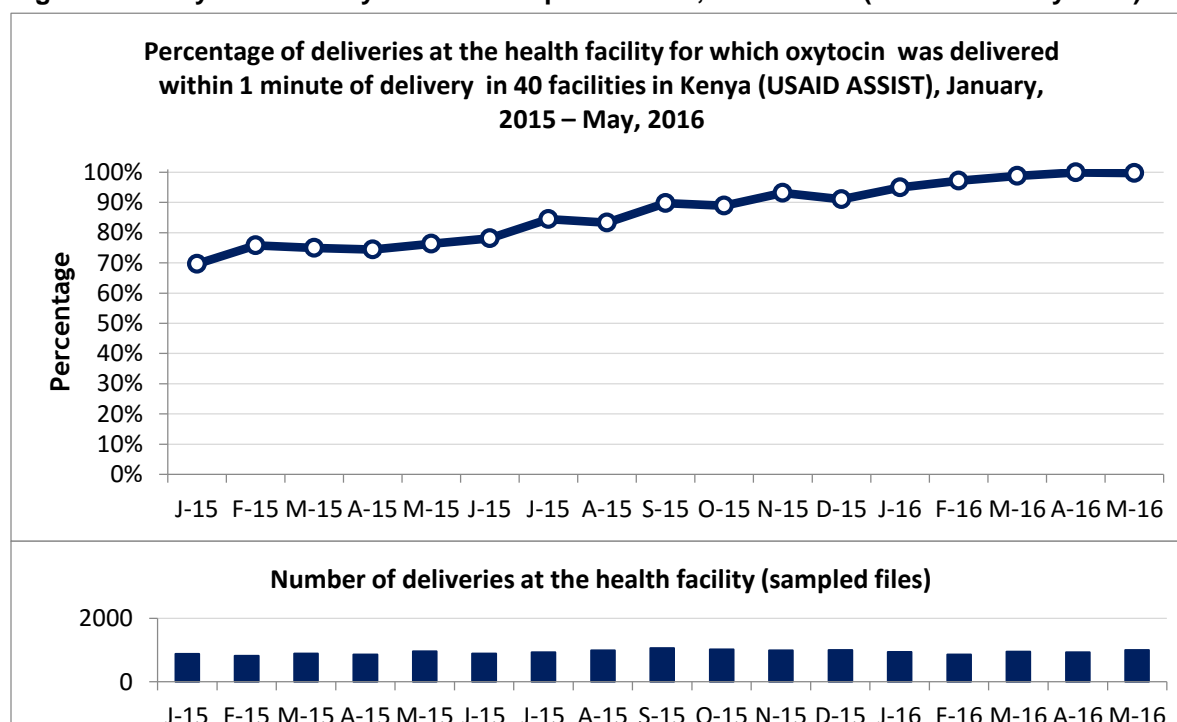
Figure 23. Kenya: Proportion of perinatal deaths (still births and early neonatal deaths), 6 facilities (perinatal mortality from main referral hospitals, 5 counties (June 2015 – Aug 2016)



- Administration of an oxytocic during delivery**

This is an indicator that was critical in looking at service delivery components including the commodity management and staff utilization. This key activity in the care of a woman during labor and delivery goes a long way in preventing post-partum bleeding. However, in many instances, this drug is often not administered at the correct time, i.e., within a minute of a vaginal delivery or before caesarean section. Facilities have been improving on this process since 2015 with a lot of success. Even in the absence of correct monitoring tools, this service is noted in improvised records. It is one of the key process indicators that has been included in the MOH RHMNCH supervision tool, for use in quarterly and biannual facility assessment. It is no longer tracked on a monthly basis as more than all of the facilities are at 100% performance (**Figure 24**).

Figure 24. Kenya: Use of oxytocin in intra-partum care, 40 facilities (Jan 2015 – May 2016)



Activity 4. Malaria case management

OVERVIEW

ASSIST works to reduce malaria mortality and morbidity through case detection and management in malaria-endemic regions in Kenya, with a focus on Busia, Siaya, and Kakamega counties. The work in FY16 built on the work implemented in FY15 that focused on applying improvement techniques to their malaria programming approach, which included: Establishment of county-level malaria TWG--this is a subcommittee of the county overall quality management team; and supporting 25 high case-load facilities to set up improvement teams focused on improving malaria services at facility level by implementing the three Ts strategy (Test, Treat, Track).

KEY ACCOMPLISHMENTS AND RESULTS

- **Attended a President’s Malaria Initiative (PMI) partners meeting in Kisumu** (Nov 24, 2015). The objectives of the meeting were: a) to provide an overview of the Global PMI Strategy 2010 – 2015 and b) to provide an opportunity for technical exchange and partners’ getting to know each other. ASSIST made a presentation and was requested to scale up the initiative to other regions.
- **Held learning sessions** (Dec 2015 and Aug. 2016): ASSIST supported a malaria learning session, which brought together three county and 25 sub-county malaria coordinators from the three focus counties and five county malaria coordinators from other counties within the region. It provided an opportunity for inter-county peer learning and sharing of change ideas across the 3T strategy. The National Malaria Control Program technical leads gave updates on the revised Kenya Malaria Strategy 2009-2018 and the National Malaria guidelines. Supported a malaria learning session in Kisii (Aug 2016). The session brought together technical officers from the National Malaria Control Program, malaria implementing partners in the Western and Nyanza region, county and sub-county malaria coordinators from Busia, Siaya, Kakamega, and Migori counties to share the progress in the QI projects that they carried out over the last year.
- **Supported three county malaria TWG meetings in Kakamega and Busia counties (Q2 and Q3) and Siaya County (March 2016)**. These meetings incorporated the county MOH and malaria implementing partners. Key objectives for the meetings were to: 1) review MOH malaria program data for Q2; 2) identify the 25 priority facilities that will serve as centers of excellence for

intensive ASSIST facility-level support; 3) sensitize the county and sub-county QI teams on the ASSIST malaria QI indicators that will be monitored across the 25 COEs; 4) identify facility coaches; and 5) develop coaching work plans.

- **QI coaching activities in the 25 priority facilities (Q1-Q4).** Coaching sessions targeted the pharmacy, laboratory, and outpatient departments. These is a monthly activity where the government's malaria program coordinator holds meetings with the facilities to discuss improvement on the key malaria improvement outcomes. ASSIST supports the coaches with transport facilitation while the project's technical officer attends some of the coaching sessions.
- **Malaria QI coaches meeting held (March 21-24, 2016).** This provided an opportunity to meet all the QI coaches from the three counties, share the roles and responsibilities of a coach, agree on the QI indicators, and develop facility-specific work plans.
- **ASSIST supported malaria QI continuing medical education (CMEs) sessions in 25 sub-counties in the three counties that promote peer learning and exchange of successful change ideas across the various facilities (Q2-Q4).**
- **Presentation at the National Malaria Case Management meeting (Feb 15, 2016).** ASSIST shared malaria QI results from Khunyang sub-county Hospital (Busia County), providing an opportunity for other partners to adopt/adapt best practices from the facility. Thereafter, ASSIST was requested by the National Malaria Control Program to scale up the improvement work to other counties.
- **Change ideas implemented at facility level include (see Figure 28):**
 - Several CMEs conducted on malaria case management to educate on national guidelines
 - Job aids on malaria case management provided in clinical rooms
 - Posters of malaria case management put up in waiting areas to educate the clients on treatment of malaria only for confirmed malaria cases
 - Health education to reinforce importance of not providing antimalarial if diagnosis is not confirmed
 - Pharmacy confirm malaria testing and diagnosis before issuing antimalarial. Pharmacist not issuing antimalarial if there is no evidence of malaria diagnosis through testing. They also follow up antimalarial prescriptions that had no evidence of a test with the concerned clinician.
 - Malava Health Center introduced 24-hour laboratory services
 - Monthly data review to compare cases registered as febrile illness in the outpatient department register, malaria tests conducted in the lab daily activity log, Rapid Test Kits (RTK) daily activity register, and the malaria commodities daily activity register, which captures information on the patient ID, age weight band, malaria test done, and Artemether Lumefantrine (AL) band issued. With this tool they are also able to check if the client had a correct dose of AL issued.
- **Conducted maturity index assessment on QIT for the 25 COE facilities, of which 6 are testing changes and showing improvement in at least one process of care indicator (July-Sept 2016).**
- **Conducted QI data validation on malaria documentation³ in 7 COE facilities in Kakamega County (Aug 2016).**
- **Supported a joint QI coaches meeting of Kakamega, Busia, Siaya counties (July 2016).**
- **Held a meeting with the Maternal Child Survival Program (MCSP) to create QI scale-up synergy in Migori and Homa Bay counties (Aug 2016).**
- **Participated in Migori malaria stakeholders meeting (Aug 2016).**

Results:

- **Figure 25** shows a steady increase in the proportion of confirmed malaria cases in three implementation counties, as compared to the control ones. This means that QI teams are working towards eliminating possible misuse of anti-malaria drugs that are dispensed based on a patient's

³ Malaria suspected, tested, confirmed and treated.

clinical presentation. **Figure 26** illustrates the relation between anti-malarial drugs dispensed to the confirmed malaria cases at one facility, Khunyangu Sub-County Hospital. This facility focused on ensuring that anti-malarial drugs are only dispensed to laboratory confirmed cases. This reduces wastefulness and reduce the risk of exposing patients to unwarranted medication side effects.

- **Figure 27** shows improvement in malaria diagnosis in ASSIST-supported sites in Busia County.
- The percentage of facilities with complete and accurate malaria data in DHIS, 11 sites, Kakamega County increased from 64% in October 2015 to 89% in August 2016 (**Figure 28**).

Figure 25. Kenya: Number of diagnosed malaria cases, 3 intervention counties vs. 6 comparison counties (Jan 2014 – Feb 2016)

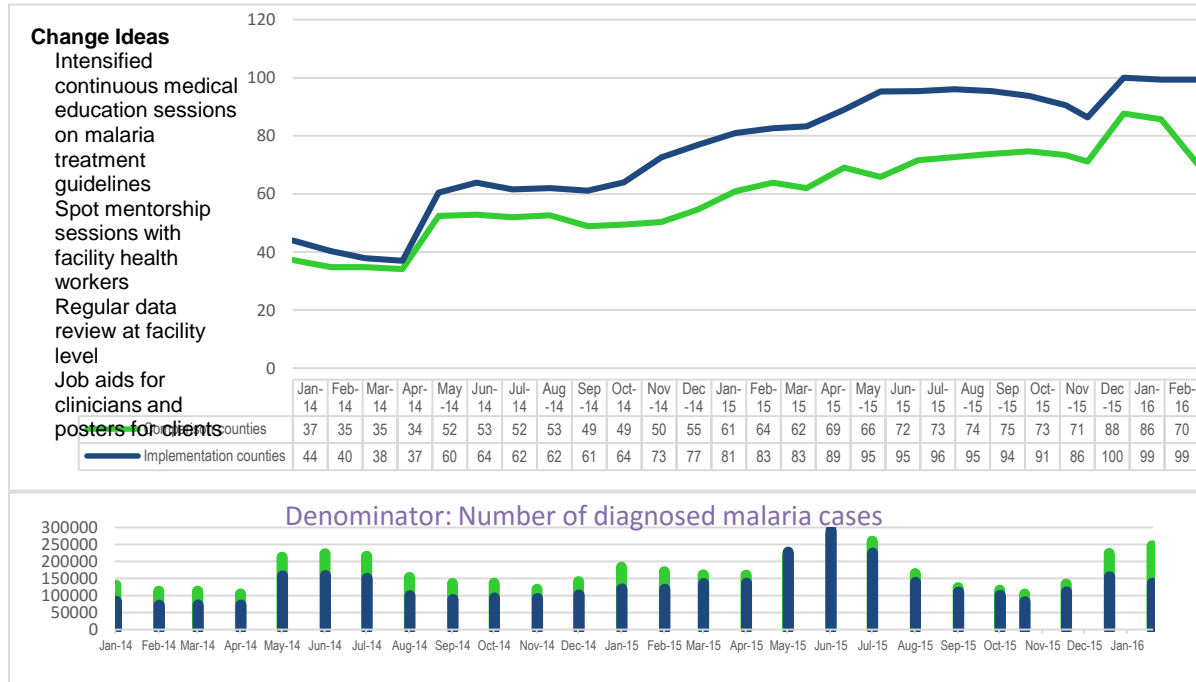
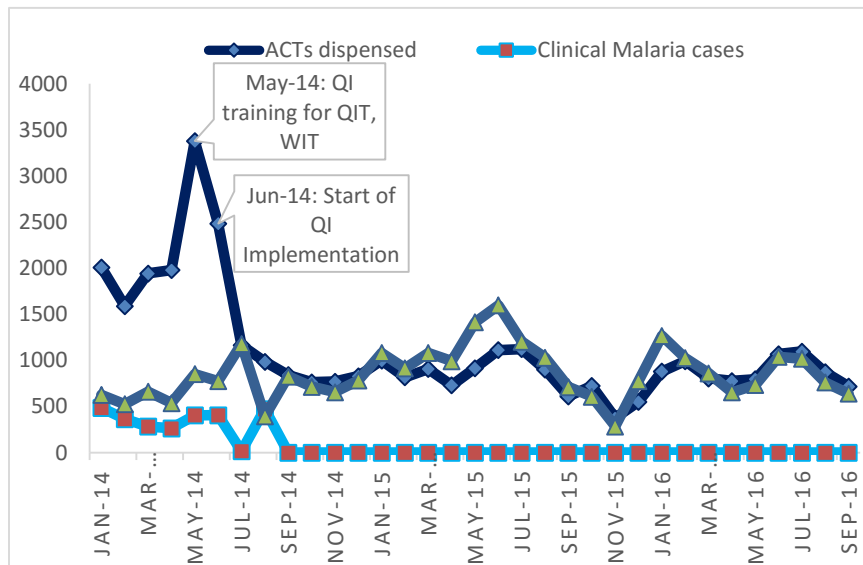
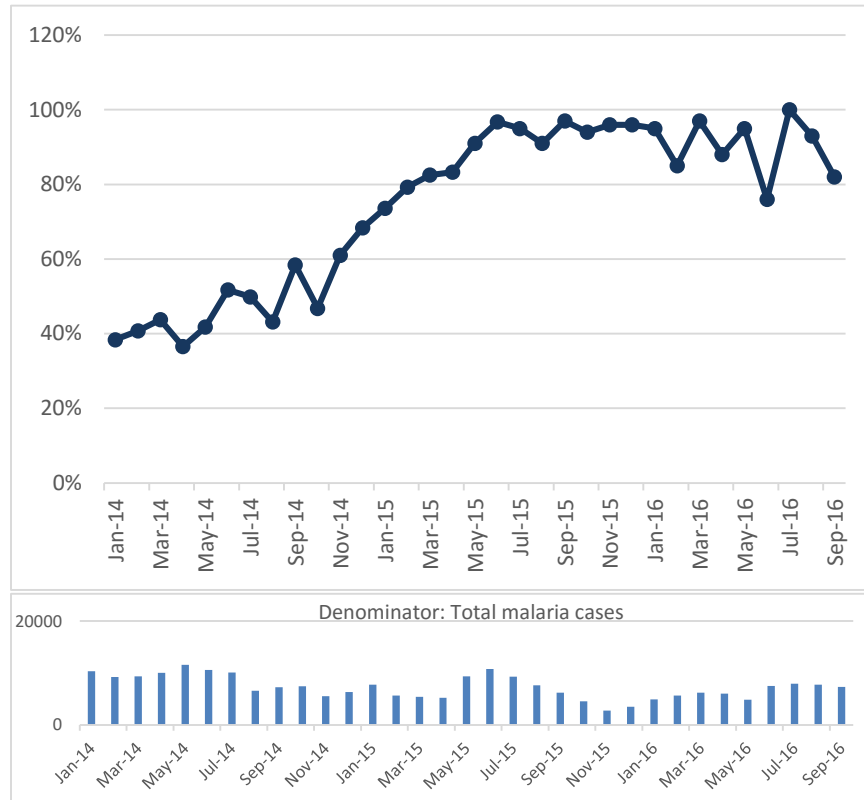


Figure 26. Kenya: Improving malaria case management, Khunyangu Sub-County Hospital (Jan 2014 – March 2016)



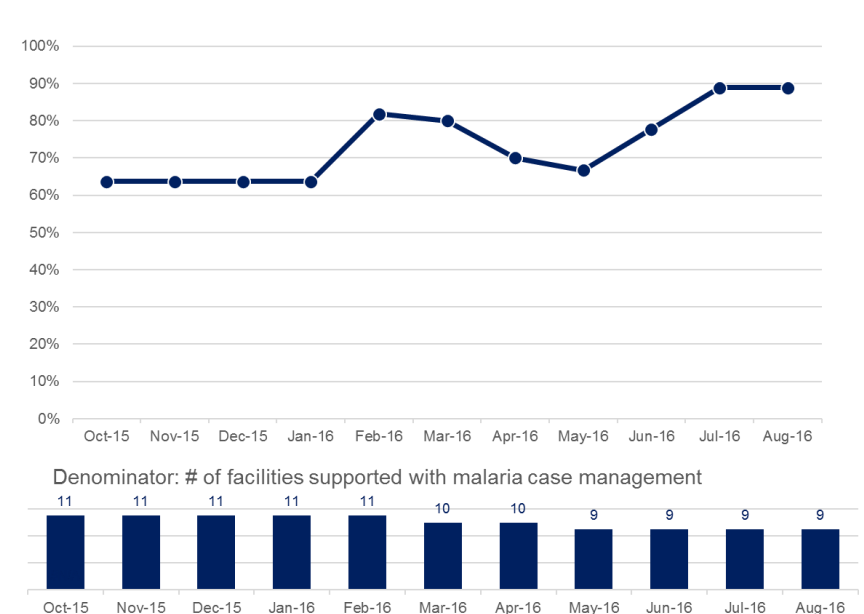
- Change ideas**
1. CME's on malaria case management
 2. Job aids provided in clinical rooms
 3. Client health education through posters in waiting areas and morning health education talks
 4. Strict drug dispensing policy in pharmacy
 5. Monthly data review
 6. Revived the hospital Medicine and Therapeutics Committee (MTC) to monitor rational use of AL and report to the WIT accordingly.

Figure 27. Kenya: Improvement in malaria diagnosis, 19 sites, Matayos sub-County, Busia County (Jan 2014 – Sep 2016)



- Change ideas**
- CME's and OJT on commodity forecasting and quantification
 - Requisition of RDTs quarterly
 - Redistribution of RDTs
 - CME's on microscopy
 - On job training for new staff
 - Repair of faulty microscopes
 - Purchase of an additional microscope.
 - Regular support supervision

Figure 28. Kenya: Percentage of facilities with complete and accurate malaria data in DHIS, 11 sites, Kakamega County (Oct 2015-Aug 2016)



- Changes tested**
- Daily page summaries to make compilation of monthly summaries and data verification easier
 - Mentorship of new staff on documentation
 - Monthly data review and validation before submission to sub-county level
 - Minimising self requests of antimalarials by facility staff
 - Stringent measures at pharmacy only dispensing antimalarials to cases that have confirmed malaria
 - Active redistribution of commodities
 - Mentorship of staff on commodity forecasting and quantification

Activity 5. OVC and Child Protection (National Level)

OVERVIEW

In FY16, ASSIST worked with the MLSS&S to strengthen the national child protection system. Specifically, ASSIST supported the National Council for Children Services (NCCS) to build and strengthen child protection thematic committees for ease of coordination and national level reporting, institutionalize the national plan of action (NPA) for children, and support the Department of Children Services (DCS) to institutionalize the national psychosocial support (PSS) guidelines.

KEY ACCOMPLISHMENTS AND RESULTS

- **ASSIST held a meeting with the NCCS and county coordinators of children services to develop a road map on the NPA roll-out** (Nov 2015). The coordinators identified broader county-specific child protection gaps.
- **Supported Strategy Review for Department of Children Services (DCS): ASSIST supported the DCS Strategy Review Workshop, enabling the identification of challenges in quality service delivery to children, with a road map included the current DCS plans and budgets as output** (Aug 2016).
- **ASSIST in collaboration with REPSSI and the Department of Children Services trained the 47 county children coordinators on psychosocial support with the main focus on the new National PSS guidelines and helped them develop county-specific implementation work plans** (Nov 2015). ASSIST in collaboration with USAID service delivery partners is tracking the implementation of these work plans in five counties (Migori, Uasin Gishu, Nakuru, Embu, and Mombasa) while the department will track implementation in the other counties.
- **ASSIST with NCCS held two round table meetings with Uasin Gishu and Embu County AACs to disseminate the NPA** (March 2016). During the meetings, roles, and responsibilities of County AACs in child protection were discussed and thematic working groups formed.
- **ASSIST supported the Department of Children Services to start the development of a child and caregiver friendly version of the national PSS guidelines** (May 2016). ASSIST carried out focused group discussions with children (ages 6-18) from two schools to validate the child and caregiver version of the PSS guidelines (Aug 2016). This led to the development and printing of both the simplified PSS version for children and caregivers guide.
- **Held QI training for members and secretariat (10 men, 15 women) of the National Council for Children Services (NCCS)** (May 2016).
- **ASSIST supported the Department of Children Services to train County Child Protection TWG members drawn from seven counties (Embu, Nakuru, Migori, Mombasa, Kilifi, Kisumu, and Uasin Gishu) on Quality Improvement for Child Protection** (July 2016). This enabled each county to develop a county-specific child protection plan.
- **ASSIST supported the National Council for Children Services to disseminate the National Plan of Action (NPA) in Kisumu County** (Aug 2016).

Activity 6. OVC and Child Protection (County Level)

OVERVIEW

ASSIST works both with the county governments and nine USAID OVC service delivery partners to institutionalize QI at the point of service delivery. ASSIST focus is to work with nine USG partners in nine counties to consolidate QI interventions in HIV care and treatment, household economic strengthening, and child protection.

KEY ACCOMPLISHMENTS AND RESULTS

Case management (multiple implementing partners)

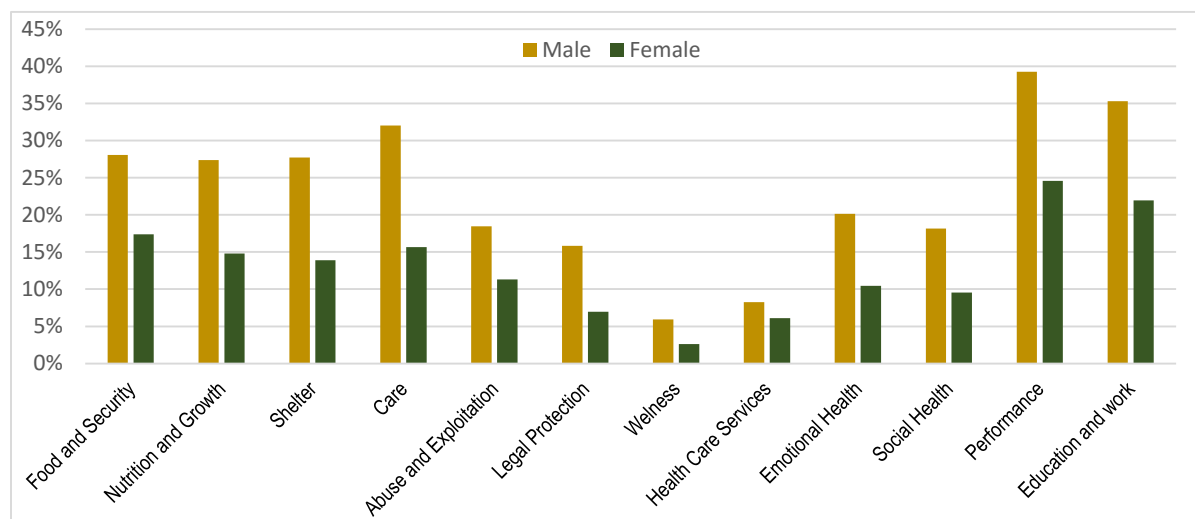
- **Worked to improve case management for vulnerable children through regular use of the child status index (CSI) assessment tool in APHIA Plus Kamili, Wezesha and Watoto Wazima OVC service delivery partners** (Q1-Q2).

- Four teams supported by Wezesha, a USAID implementing partner, carried out CSI assessments (Jan 2016). An implementation plan based on the result was developed by the team.
- ASSIST supported Chepkoilel and Kapsoya QITs to carry out CSI assessments (Feb 2016). The teams have developed their plans and are currently in the process of implementation.
- Four QI teams in Embu County conducted CSI assessment for their children (Jan – Feb, 2016). In March 2016, ASSIST supported them with CSI analysis, root cause analysis, and development of change ideas on identifying these gaps.

APHIA plus Kamili

- **SWAK, a local IP supported by APHIA plus Kamili, conducted a CSI assessment among 860 children** (March 2016). Results are shown in **Figure 29**. From the analysis, the service areas with the biggest gaps identified included food and nutrition, care, and education.

Figure 29. Kenya: Percentage of Child Status Index scores that were bad or very bad in SWAK, Municipality Team (Jan - Mar 2016) (N= 370 boys and 490 girls)



- The team carried out a root cause analysis and identified the following factors affecting the education service area and possible change ideas to test:

Service Area	Root Cause	Change Ideas
Education	<ul style="list-style-type: none"> ● Substance abuse (alcohol, drugs) among parents and children ● Irresponsible parents (Parents unable to take care of their children due to negligence) ● Inadequate financial resources for school levies—exams, computer fees, development fee ● Inadequate food hence children go to school hungry 	<ul style="list-style-type: none"> ● Community awareness on substance abuse ● Work with area chief to reduce the sale of illegal alcohol ● Involve counsellors, religious leaders, health workers ● Home visits to talk to parents about parenting skills ● Implement Watano initiative for caregivers— help each other take care of our children when one is absent ● Implement Ngumbasho (table banking); to help in saving and loaning to pay for school levies, food, to help curb absenteeism ● Peer mentorship to enhance importance of education among children

APHIA plus Nuru Ya Bonde

- **ASSIST continued offering above-site TA to county governments and USG-funded partners in the following technical areas (Q1 to Q4):**
 - Mainstreaming QI in service delivery through capacity building of county DCs, partners, and QITs.
 - Quality improvement training for AMPATH coaches (June 2016).
 - Supporting partners to regularly use the CSI for case management in Embu County (RCEA and AMURT).
 - Establishment of referral system to ensure HIV care, support, and treat of adolescents and children through collaboration with health service providers in Migori County.
 - Offered TA in establishing child protection structures (TWG, Thematic Committees) to county Departments of Children Services in Mombasa, Kilifi, Nakuru, Embu, Migori, and Uasin Gishu.
- **Monthly QI coaching conducted for 6 counties:** (Q1 to Q4). Narok, Mombasa, Uasin Gishu, Siaya, Migori, and Embu. ASSIST provided mentorship and coaching to the QITs supported by AMPATH plus, APHIA plus Nuru ya bonde, and APHIA plus Western. Documentation of best practices for Kapseret QIT was also done.

APHIAplus Western

- **Supported a learning session brining in 26 community QI teams** from Migori, Narok, Uasin Gishu, Siaya, Embu, and Homa Bay counties (Sept 2016).
- **Economic strengthening and social protection support - Migori County.** Supported QITs to track and report Voluntary Savings and Loan Association (VSLA) members able to meet needs of their children as identified through CSI assessment. Change ideas tested:
 - Supporting watano initiative⁴; tracking membership, saving and loaning among members; and tracking educational support provide to children by members of VSLA groups.
- Sex-disaggregated data tracking educational support provided to children show that roughly equal numbers of male and female members of VSLA groups pay school fees, with having more than doubled from Oct 2015 to May 2016. For caregivers, however, sex-disaggregated data tracking educational support provided to children showed that fewer female than male caregivers paid school fees in 2015, but more female than male caregivers did so in 2016. The number of male caregivers increased by 12%, and the number of female caregivers by 51%.
- **ASSIST supported Dago Dala Hera QIT and the Migori County QI team to improve referrals to ensure HIV care, support, and treatment for adolescent and children.** Change ideas that were proposed and later tested by September 2016 are shown in **Table 1**.

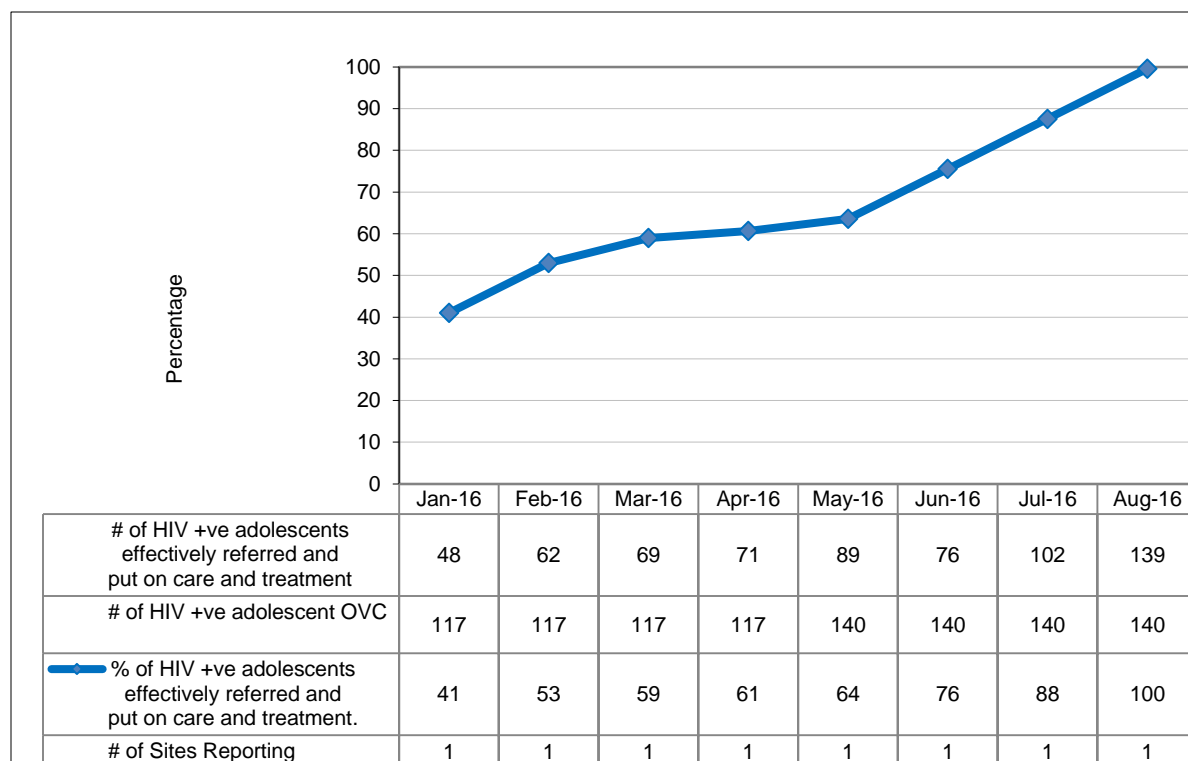
Table 1. Kenya: Problems affecting OVC referrals and change ideas proposed and tested

Problems affecting referrals	Change ideas
– Inadequate access to referral forms	✓ Get adequate referral forms from APHIA plus and MOH
– Unclear responsibilities for who should refer and follow-up HIV-positive OVC	✓ Ensure timely and proper documentation through register of HIV-positive children and caregiver include their clinic days and make phone call follow-ups with the clients
– No clear mechanisms to track referrals	✓ A Community Health Volunteer is to be identified as responsible for tracking and follow-up of referral cases
– Non-adherence to MOH referral tool	✓ Hold awareness days with HIV-positive children and their caregivers to identify those who have not been linked to care and treatment facilities

⁴ Watano initiative is a small group of five caregivers living in the same village. It is a sub-group of larger caregivers' support group members who have come together in order to find solutions to common problems affecting them and faster realization of outcomes and transformation.

- **This effective referral system guarantees a close relationship between all levels of the health system and helps to ensure people receive appropriate care at the right time as close to their homes as possible.** This system uses a standardized MOH referral form throughout the network of service providers from the community through the community health worker to the health facility, and it facilitates appropriate feedback to the initiator of the process. The referral form is then filed both at the facility and the QIT offices. In January 2016 41% of HIV-positive adolescents had been referred and put on care and treatment in 19 sites in Migori County. By August 2016, this had increased to 100% (**Figure 30**).

Figure 30. Kenya: Percentage of HIV-positive adolescents effectively referred and put on care and treatment, 19 Sites, Migori County (Jan-Aug 2016)



IMPROVEMENT IN KEY INDICATORS

Activity	Indicators	Baseline	Dec 2015	April – June 2016	Most Recent
PHFS	% of HIV-exposed mother-baby pairs (0-24 months) in active care	30% (Sept 2013) 13 sites	58% (Dec 2015) 15 sites	68% (Jun 2016) 14 sites	67% (Aug 2016) 10 sites
	% of HIV-positive pregnant women attending ANC in a given month on ARVs (prophylactic or HAART)	83% (Sept 2013) 13 sites	98% (Dec 2015) 15 sites	100% (Jun 2016) 14 sites	100% (Aug 2016) 9 sites
	% of HIV-positive pregnant women identified at ANC given prophylactic ARVs for their unborn baby monthly.	81% (Sept 2013) 14 sites	89% (Dec 2015) 15 sites	89% (Jun 2016) 14 sites	93% (Aug 2016) 9 sites

Activity	Indicators	Baseline	Dec 2015	April – June 2016	Most Recent
	% HEI aged 6-8 weeks tested for HIV with documentation of results (1st PCR)	18% (Sept 2013) 13 sites	54% (Dec 2015) 15 sites	65% (Jun 2016) 14 sites	89% (Aug 2016) 9 sites
	% of HEI on appropriate NVP prophylaxis	70% (Jan 2014) 12 sites	81% (Dec 2015) 15 sites	97% (Jun 2016) 14 sites	100% (Aug 2016) 9 sites
	% of HEI aged ≤6 months who are exclusively breastfed	65% (Sept 2013) 11 sites	68% (Dec 2015) 15 sites	91% (Jun 2016) 14 sites	91% (Aug 2016) 9 sites
	% of mother-baby pairs who received nutrition assessment, categorization, counselling, and support (NACS) in a given month	21% (Sept 2013) 14 sites	79% (Dec 2015) 15 sites	90% (Jun 2016) 14 sites	98% (Aug 2016) 9 sites
	% HEI aged 9 months tested for HIV at 9 months (Ab or PCR done if indicated)		52% (Dec 2015) 15 sites	70% (Jun 2016) 14 sites	71% (Aug 2016) 9 sites
	% HEI tested for HIV at 18 months (antibody test)		59% (Dec 2015) 15 sites	63% (Jun 2016) 14 sites	93% (Aug 2016) 9 sites
	% of HEI (0-24months) confirmed to be HIV-positive in the facility		Undergoing validation	7% (Jun 2016) 4 sites	
HIV care & treatment/ eMTCT (Uasin Gishu, Kakamega)	% of confirmed HIV-positive clients who were referred from PITC sites in the facility (including outreaches) and got enrolled into care at the facility CCC monthly	79% (Oct 2015) 11 facilities	82% (Feb 2016) (11 facilities)	97% (May 2016) 12 facilities	91% (Aug 2016) 12 facilities
	% of eligible HIV-positive patients on ART	100% (Oct 2015) 11 facilities	100% (Feb 2016) (11 facilities)	100% (May 2016) 12 facilities	100% (Aug 2016) 12 facilities
	Proportion of clients known to be alive and on ART 12 months after initiating ART in the facility monthly	83% (Jan 2015) 6 facilities	78% (Feb 2016) 11 facilities	70% (May 2016) 12 facilities	70% (Aug 2016) 12 facilities
	Proportion of clients attending comprehensive HIV care receiving nutritional assessment and categorization	93 (Jan 2015)	82% (Dec 2015)	98% (May 2016) 6 facilities	94% (Jul 2016) 6 facilities
	Proportion of clients on HAART for last 12 months who received viral load testing	62% (Jan 2015) 4 facilities	80% (Mar 2016) 11 facilities	73% (May 2016) 6 facilities	66% (July 2016) 6 facilities

Activity	Indicators	Baseline	Dec 2015	April – June 2016	Most Recent
	Proportion of clients on ART for last 12 months who attained viral suppression	33% (Jan 2015) 4 facilities	89% (Mar 2016) 11 facilities	85% (May 2016) 6 facilities	95% (July 2016) 6 facilities
	% of HIV-exposed mother-baby pairs (0-24 months) in active care	0% (Jan 2015) 1 facility	96% (Dec 2015) 11 facilities	78% (Jun 2016) 7 facilities	73% (Aug 2016) 4 facilities
	% of HIV-positive pregnant women attending ANC in a given month on HAART)	90% (Jan 2015) 6 facilities	115% (Jan 2016) 11 facilities	44% (Jun2016) 8 facilities	85% (Aug 2016) 4 facilities
	% HEI who received 1st PCR by 8 weeks and results are documented	90% (Jan 2015) 6 facilities	72% (Dec 2015) 17 facilities	93% (Jun 2016) 8 facilities	61% (Aug 2016) 4 facilities
	% HEI aged 9 months tested for HIV at 9 months (Ab or PCR done if indicated)	60% (Oct 2015) 2 facilities	60% (Jan 2016) 6 facilities	79% (Jun 2016) 8 facilities	41% (Aug 2016) 4 facilities
	% HEI diagnosed with HIV between 0 and 18 months	33% (Jan 2015) 6 facilities	16% (Dec 2015) 6 facilities	0% (Jun 2016) 8 facilities	0% (Aug 2016) 4 facilities
	% of mother-baby pairs who received nutrition assessment, categorization, counselling, and support (NACS) in a given month	6% (Jan 2015) 6 facilities	14% (Dec 2015) 6 facilities	91% (Jun 2016) 7 facilities	41% (Aug 2016) 4 facilities
MNCH/RH (Kitui, Taita Taveta, Kakamega, and Isiolo counties)	Proportion of pregnant women who receive minimum package of services at first ANC visit	73%; Jan/2015, 10 sites	80%; Feb/2016, 10 sites	77%; (May 2016) 20 facilities	70%; (Aug 2016) 22 sites
	Proportion of women giving birth in the health facility with a complete partograph	39%; Mar/2015, 7 sites	79%; Feb/2016, 40 sites	87%; May/2016, 35 sites	85%; Sept 2016, 40 sites
	Percentage of deliveries at the health facility for which oxytocin was delivered within 1 minute of delivery	68%; Jan 2015, 7 sites	97%; Feb/2016, 40 sites	100%; May 2016, 29 sites	89%; Aug 2016, 40 sites
	Proportion of emergency caesarean section performed within an hour of decision – Comprehensive EmONC facilities	41%; Aug/2015, 3 sites	68%; Jan/2016, 3 sites	59% May/2016 2 sites	88%; Aug 2016 5 sites
	Percentage of newborns who required resuscitation documented to have received appropriate resuscitation	86%; Jan/2015, 7 sites	87%; Feb/2016, 9 sites	Indicator under review because of	Indicator not pursued, subject to MOH

Activity	Indicators	Baseline	Dec 2015	April – June 2016	Most Recent
				criterion used	reviews
	Proportion of newborns who were given injection Vitamin K	57%; Oct/2015, 3 sites	93%; Feb/2016, 3 sites	100%; May/2016, 3 sites,	51%; Aug 2016 18 sites
	Proportion of babies with confirmed or suspected neonatal infection (weekly monitoring)	22%; Sept/2015, 1 site	4%; Feb/2016, 1 site	4%; May/2016 Isiolo	Median of 2% for Intervention phase 2
	Proportion of post-partum women counselled on FP who accepted an FP method and were provided with a method before discharge (<i>dropped, ASSIST to agree on new indicator with RH coordinators/partners</i>)	0%; Aug/2015, 3 sites	2.4%; Feb/2016, 3 sites	Indicator dropped	Indicator dropped
	Proportion of women attending the post clinic at six weeks counseled on family planning method; Weekly tracking from April 2016 a four-month PDSA new indicator	13%; Week 1 of April, 2 sites in Kakamega	32% at week 1 of June	New indicator	39% at Week 4 of Aug 2016; two sites

Activity	Indicators	Baseline	Dec 2015 – Feb 2016	Sep 2016
Malaria	% of OPD cases suspected with malaria (with fever or HX of fever) who are tested	93% (Oct 2015) 14 facilities	89% (Feb 2016) 12 facilities	100 % (Sept 2016) 23 facilities
	% of outpatient confirmed malaria cases (microscopy or RDT) treated as per national guideline	74% (Oct 2015) 13 facilities	62% (Feb 2016) 11 facilities	93% (Sept 2016) 23 facilities
	% facilities supported who report stock out of RTKS	36% (Oct 2015) 14 facilities	43% (Dec 2015) 14 facilities	10% (Sept 2016) 23 facilities
	% facilities supported who report stock out of AL	21% (Oct 2015) 14 facilities	36% (Dec 2015) 14 facilities	7% (Sept 2016) 23 facilities
	% of facilities with complete and accurate malaria data in DHIS	31% (Oct 2015), 15 facilities	87% (Dec 2015) 15 facilities	92% (Sept 2016) 12 facilities

Activity	Indicators	Baseline	Dec 2015 – Feb 2016	Sep 2016
OVC	% of HIV +ve adolescents effectively referred and put on HIV care and treatment	41% (Jan 2016)	64% (May 2016)	100% (Aug 2016)

GENDER INTEGRATION

- All OVC data are sex-disaggregated and analyzed for any discrepancies (CSI and process data). The only OVC data that are not sex disaggregated are the referral data which will be sex-disaggregated in FY17.
- The team did not do much on gender integration in malaria but will collect sex-disaggregated data in FY17 and look out for any gender gaps.
- Male involvement in ANC and PMTCT: Pregnant women are encouraged to bring their spouses for ANC testing during counselling. Its effect on the ANC attendance is what has not been documented or measured thus far.

SUSTAINABILITY AND INSTITUTIONALIZATION

ASSIST's technical assistance in Kenya has been purposefully designed to institutionalize the capacity for continuous improvement in national, county, and facility structures for health care delivery. ASSIST works closely with all relevant MOH units to ensure that the project's support for facility-level improvement work and engagement with county and sub-county structures is fully aligned with national policies and strategies.

LESOTHO

BACKGROUND

The Government of Lesotho (GOL) launched its National ART Program in November 2004. Since the national program was launched, the GOL's efforts to provide ART have been hampered by chronic shortages of staff due to high staff attrition rates and historically high costs of drugs used in ART. In recent years, the country has made significant progress in scaling up treatment for HIV and AIDS. The number of people on treatment has risen steadily since the onset of the national program in spite of service delivery gaps. A key problem still being encountered is that only a few of the children requiring therapy receive it. Since November 2013, the GOL has worked with the USAID ASSIST Project on the following areas:

- Development of a National Strategy for improving the quality of clinical services. This strategy is to be consistent with the PEPFAR Quality Framework;
- Strengthening linkages between HIV testing and counselling (HTC), antenatal care (ANC), maternal, neonatal, and child health (MNCH), HIV care and treatment, prevention of mother-to-child transmission of HIV (PMTCT), and home-based care (HBC) services;
- Improving the quality, uptake, and retention of services along the continuum of PMTCT care; and
- Scaling up of quality improvement (QI) within integrated clinical services.

In FY16, ASSIST's work in Lesotho has been revised to align it to the PEPFAR Country Operational Plan (COP 15). COP 15 defines the intention of USAID to increase the number of eligible people receiving ART with the key aim of achieving 80% coverage in the five districts ("scale-up districts") defined as being most burdened by HIV. (The other five districts have been designated as "sustained response" districts.)

In June 2016, Lesotho became the first country in the world to launch the new WHO-recommended "Test and Treat Initiative" for managing the HIV pandemic. This initiative is expected to exponentially increase the number of patients of all ages on ART in Lesotho. ASSIST has been requested by USAID to support an enhanced supportive supervision program to oversee the implementation of the initiative. The MOH has requested the institution of a QI project for the implementation of the Test and Treat Initiative.

In FY16, USAID Lesotho invited ASSIST to work on enhancing service delivery and improving outcomes for vulnerable children and their families at the national, district, and community levels in coordination with the Ministry of Social Development (MOSD). This has been undertaken through engaging and capacitating national and local social service structures. ASSIST is supporting OVC programming, targeting 44,597 children, in the five high-priority, high HIV-burden districts of Berea, Leribe, Mafeteng, Maseru, and Mohale's Hoek. ASSIST has built on and extended the work previously accomplished under MSH's Building Local Capacity.

Scale of USAID ASSIST's Work in Lesotho



■ HIV
 ■ Sustained Response



HIV: MOH, 3 IPs
OVC: MOSD, 8 local NGOs



HIV: 10 out of 10 districts:
5 sustained response and 5 scale-up districts
OVC: 5 out of 10 districts



172 facilities



QI Teams (9 district and 54 facility)



1,916,574 out of 1,916,574

PROGRAM OVERVIEW

What are we trying to accomplish?	At what scale?
1. Strengthen linkages and retention to improve clinical services	
<ul style="list-style-type: none"> Eliminate new infections among children through implementation of evidence-based high impact interventions 	<ul style="list-style-type: none"> 5 scale-up districts. Entails intensive support at site level and technical support to the District Health Management Team (DHMT)
<ul style="list-style-type: none"> Reduce AIDS-related maternal deaths through implementation of evidence-based, high-impact interventions 	<ul style="list-style-type: none"> Technical support will be provided to the MNCH program to build capacity for QI Support and TA to TWG/Steering Committee/PMTCT Program to create capacity for QI oversight
<ul style="list-style-type: none"> Increase ART coverage by establishing linkages to ART programs and home-based care 	<ul style="list-style-type: none"> 103 sites in 5 scale-up districts: Mafeteng, Maseru, Berea, Leribe, and Mohale's Hoek.
<ul style="list-style-type: none"> Improve patient knowledge, skills, and self-confidence to manage their HIV as a chronic condition through implementation of the Chronic Care Model 	<ul style="list-style-type: none"> Entails intensive support at site level and technical support to the DHMT
<ul style="list-style-type: none"> Build capacity of the 5 DHMTs of the scale-up districts to oversee and monitor the quality of services for PLHIV currently enrolled in PMTCT, prevention, and care and treatment 	

What are we trying to accomplish?	At what scale?
2. Strengthen the capacity of DHMTs in five “sustained response districts” (SRD) to oversee and monitor the quality of services for PLHIV currently enrolled in PMTCT and care and treatment	
<ul style="list-style-type: none"> Determine the capacity-building requirements for each DHMT and Health Unit in-charges (collective and individual member capacities) 	<ul style="list-style-type: none"> Interventions will be directed towards the provision of support to the DHMTs and Health Unit in-charge in the SRDs
<ul style="list-style-type: none"> Define and set site- and district-level targets for combination prevention aligned to PEPFAR-supported ART passive enrolment 	<ul style="list-style-type: none"> 5 sustained-response districts: Butha-Buthe, Mokhotlong, Quthing, Qacha’s Nek, and Thaba-Tseka
<ul style="list-style-type: none"> Define QI benchmarks for monitoring site-level quality of care 	<ul style="list-style-type: none"> DHMTs as well as selected health centers in each district
<ul style="list-style-type: none"> Ensure and support the conduct of quarterly supportive supervision and coaching visits to sites to monitor QI benchmarks 	<ul style="list-style-type: none"> DHMTs in the SRDs
<ul style="list-style-type: none"> Conduct bi-annual district learning sessions 	<ul style="list-style-type: none"> These will be undertaken initially by ASSIST but will, over time, be handed over to the DHMTs.
<ul style="list-style-type: none"> Ensure that DHMTs hold monthly data validation exercises to monitor both site- and district-level data accuracy 	<ul style="list-style-type: none"> DHMTs and the in-charges and strategic information focal points at the sites in the SRDs
<ul style="list-style-type: none"> Develop a system for recognizing and “rewarding” the best-performing district (in relation to retaining PLHIV on treatment) 	<ul style="list-style-type: none"> Proposed categories of “prizes” include best district performance by indicator, best overall performance, best district QI team, and best facility QI team
3. Build capacity for national level QI program coordination and management	
<ul style="list-style-type: none"> Provide long-term QI TA to the QA/QI Unit to create central-level capacity for QI 	<ul style="list-style-type: none"> Interventions will be directed at district and national levels and cover all districts
<ul style="list-style-type: none"> Facilitate the establishment of an HIV/AIDS and TB QI TWG/Steering Committee 	<ul style="list-style-type: none"> National-level activity with the MOH (QA/QI Unit, and MOH QI Team)
<ul style="list-style-type: none"> Support the development of a National QI Strategy for HIV and AIDS services 	
<ul style="list-style-type: none"> Organize and facilitate joint quarterly partner and DHMT performance review meetings to address issues that arising from site support and data validation reports 	
<ul style="list-style-type: none"> Support creation of a National QI Training Curriculum and Plan 	
4. Quality improvement in OVC programming	
<ul style="list-style-type: none"> Issue and manage fixed obligation grants (FOGs) to local organizations 	<ul style="list-style-type: none"> 5 scale-up districts – 8 local NGOs awarded grants to provide services in 47 Community Councils

What are we trying to accomplish?	At what scale?
<ul style="list-style-type: none"> Build capacity of MOSD at central and local levels to coordinate and sustain effective and timely interventions 	<ul style="list-style-type: none"> National – 5 district QI teams in place in the 5 scale-up districts, 1 community QI team
<ul style="list-style-type: none"> Improve the well-being of vulnerable children through accessing quality essential services in five priority districts 	<ul style="list-style-type: none"> 5 scale-up districts: Berea, Leribe, Mafeteng, Maseru, and Mohale's Hoek
<input type="checkbox"/> Improvement Activity	<input type="checkbox"/> Cross-cutting Activity

Activity 1. Strengthen linkages and retention to improve clinical services

OVERVIEW

For FY16, and based on COP 15 guidance, ASSIST's aim was to reach all facilities providing HIV/PMTCT services, including referral and district hospitals, and health centers in all five of the scale-up districts. The activity is focusing on strengthening the linkages along the PMTCT continuum of care, including ANC/MNCH, HIV care and treatment, PMTCT, and HBC services.

KEY ACCOMPLISHMENTS AND RESULTS

- **PHFS review meeting** (Nov 10, 2015). This meeting focused on the district of Mohale's Hoek. Results to-date have shown Mohale's Hoek, especially the District Hospital, to be a "poor performer" in terms of PHFS.
- **QI introductory visits undertaken to the scale-up districts (SUDs) of Mafeteng, Maseru, Berea, and Leribe** (Jan 2016). M.Hoek is already a participant in QI through PHFS.
- **Mining of PHFS-related data (under-5 registers and maternal ART records) being conducted in Mohale's Hoek** to gather data to facilitate an assessment of impact of PHFS on clinical outcomes (Jan 2016 – present).
- **Preparations to conduct of DHMT skills assessment completed** (March 2016).
- **Conducted sensitization meeting at Maseru DHMT** (May 6, 2016). This meeting entailed sensitizing the Maseru DHMT on QI and on the design of the QI intervention being implemented by the MOH and ASSIST, as well as the requirements on the part of the DHMT (i.e., the roles and responsibilities of the DHMT in QI).
- **Conducted skill and competency assessments in 4 scale-up districts [Mafeteng (April 19, 2016), Mohale's Hoek (April 20, 2016), Berea (April 21, 2016) Leribe (April 22, 2016)].**
- **Conducted knowledge and skill assessment at Maseru DHMT and jointly selected the sites for Phase 1 QI implementation** (May 23, 2016). These sites were chosen based on their patient volumes as well as the prevailing quality challenges. They include: Botšabelo Center [Senkatana]HIV and AIDS Treatment Center; Qoaling Filter Clinic, Likotsi Filter Clinic, Nazareth Health Center, Domiciliary Health Center, St Joseph Hospital, Scott Hospital, Paki Health Center, St Leonard Health Center, and Thamae Health Center.
- **Conducted QI training for two scale up districts (Berea and Leribe) (June 6-8, 2016).** The training objectives were to: introduce quality improvement in clinical care; describe and discuss the principles, concepts and approaches of quality improvement; analyze health service delivery problems in the context of PMTCT and care and treatment; develop appropriate solutions to the problems; discuss commonly used QI tools; and share lessons learnt from PHFS.
- **Conducted coaching visits and verified data at 3 facilities in Mohale's Hoek namely, Mofumahali-oa-Rosary Health Center, Morifi Health Center and Lithipeng Health Center** (June 15-16, 2016). See **Figure 31 to Figure 33** for results in improving retention, quality of care, and data quality in each of these facilities.
- **Formal QI trainings conducted in 3 scale-up districts (Maseru Group 1: Aug 17-19, 2016; Maseru Group 2: Aug 24-26, 2016; Mafeteng: July 12-15, 2016; Mohale's Hoek: July 20-22, 2016).** Three DHMTs were represented; of the expected 30 participants, 21 persons attended. Collectively, these districts are comprised of 66 facilities. 61 were represented during the trainings conducted in the reporting period. 20/66 were selected as Phase 1 facilities; 18 have established

QI teams, and these are functional. Two QI teams (in Maseru and Mohale's Hoek) are in development (this will complete Phase 1). The rest of the health facilities were coached on how to build QI teams. The terms of reference for facility QI teams was defined and will be included in subsequent spread activities.

- **Onsite/in-service trainings were conducted in 5 scale-up districts.** The purpose was to orient all facility staff on QI and facilitate establishment of QI teams and projects. 27/35 (77%) of the planned onsite trainings were achieved. There was a delay in the deployment of the Berea ASSIST team (i.e., ASSIST M&E Officer and District Improvement Coordinator) and this resulted in delayed initiation of QI interventions. At the end of the onsite trainings, all facilities managed to establish facility QI teams and projects.
- **Joint supportive supervision visits.** Of the targeted 35 joint supportive supervisions, 17 (49%) were achieved. The challenge is that assigned members of the DHMTs had competing activities within the district which resulted in ASSIST district-based staff undertaking the planned supportive supervision activity on their own.
- **Coordination of ASSIST project activities within each district (August 2016).** This refers in particular to establishing effective linkages between the OVC, HIV care and treatment, and Southern Africa Regional nutrition project. Working relationships to support linkages with ASSIST OVC program sub-grantees in the scale-up districts was established, and 3 out of the 5 SUDs mapped a referral flow from community to facility-level for enhanced HIV care and treatment linkages. (Maseru and Berea sub grantees have not yet met.)
- **Facilitated meeting between 3 Maseru sub-districts** (Morija, Scott, and QE II) to orient management on QI principles, approaches, and concepts (Aug 2016). The outcome of this meeting was that the district QI team was developed with balanced representation from these three subdistricts. Each subdistrict will continue to monitor the progress in its supported facilities and report on a monthly basis to the entire team.
- **Participated in IP meeting in Leribe District (August 2016)** to share how each implementing partner is to support the district without duplicating efforts. Key IPs in this district are EGPAF, Baylor, Lesotho National AIDS Service Organisations (LENASO), and Clinton Health Access Initiative (CHAI).
- **Facilitated the PHC meeting in Leribe where all facilities presented their performance and gaps** (Aug 2016). ASSIST was announced as the partner that is going to support the facilities in integrating QI in HIV and other clinical services.
- **Integration of QI into the National Adolescent Health Program** (Aug 2016). ASSIST had a meeting with national adolescent health manager to develop interventions to integrate QI in adolescent health programs. The plan is to share the results of the situational analysis conducted of adolescent health issues and ASSIST to provide TA to shape interventions for adolescents not only focusing on HIV-positives but also targeting HIV-negatives for primary prevention.
- **Spreading the lessons learnt from demonstration sites on 3 core PMTCT indicators – retention of mother-baby pairs and data quality** (Sept 2016). The service package for PMTCT was rolled out and adopted in 35 facilities in the SUDs during Phase 1. The PHFS/PMTCT database has been modified to accommodate these new facilities.
- **Two learning and sharing sessions were conducted** (Sept 28-30, 2016) at Thaba-Tseka with 18 health facilities and at Qacha's Nek with 12 health facilities. The purpose was for the experienced facilities to share the ideas and lessons learned with the relatively new facilities.

Key results:

- At Lithipeng Health Center, retention of HIV-positive mothers and their babies improved from 58% in April 2014 to 92% in May 2016 (**Figure 31**). The percentage of mother-baby pairs receiving the standard package of care increased from 93% in April 2014 to 100% in May 2016. The percent of mother-baby pairs with complete and accurate data was maintained at 100%.
- At Morifi Health Center, retention of HIV-positive mothers and their babies improved from 58% in April 2014 to 61% in May 2016 (**Figure 32**). The percentage of mother-baby pairs receiving the standard package of care increased from 91% in April 2014 to 100% in May 2016. The percent of mother-baby pairs with complete and accurate data increased from 58% in April 2014 to 90% in May 2016.

- At Mofumahali-Oa-Rosari Health Center, teams struggled with retention of HIV-positive mothers and their babies, going from 89% in April 2014 to 67% in May 2016 (Figure 33). The percentage of mother-baby pairs receiving the standard package of care increased from 0% in April 2014 to 100% in May 2016. The percent of mother-baby pairs with complete and accurate data increased from 89% in April 2014 to 94% in May 2016.

Figure 31. Lesotho: Improving retention, quality of care and data quality, Lithipeng Health Center (April 2014-May 2016)

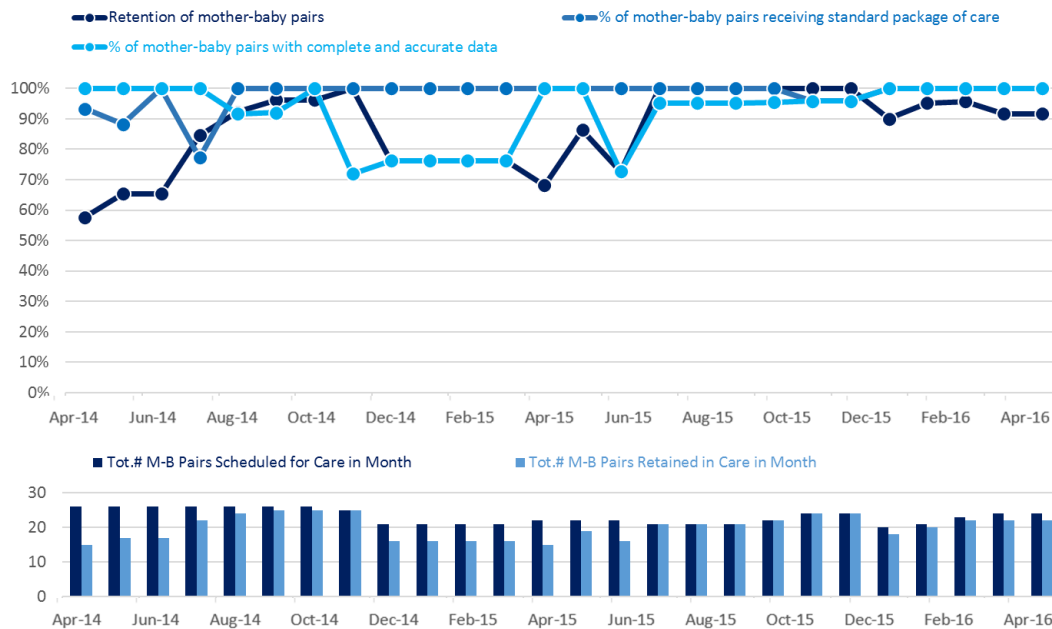


Figure 32. Lesotho: Improving retention, quality of care and data quality, Morifi Health Center (April 2014-May 2016)

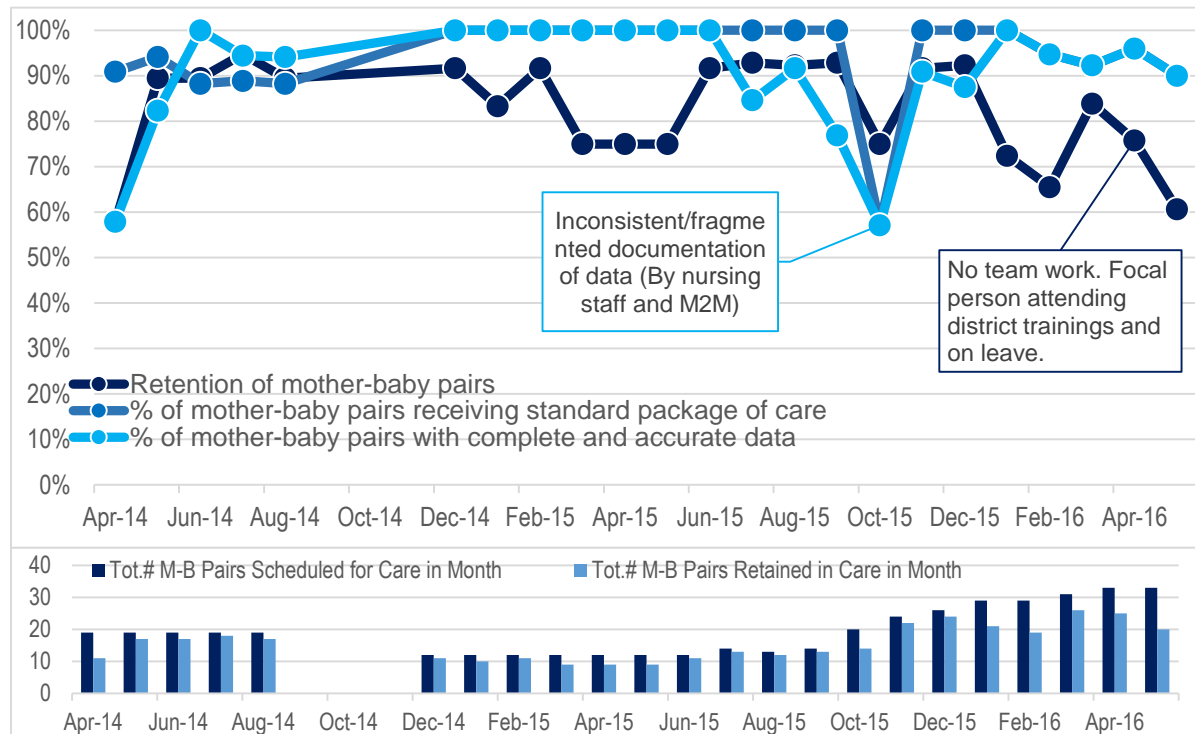
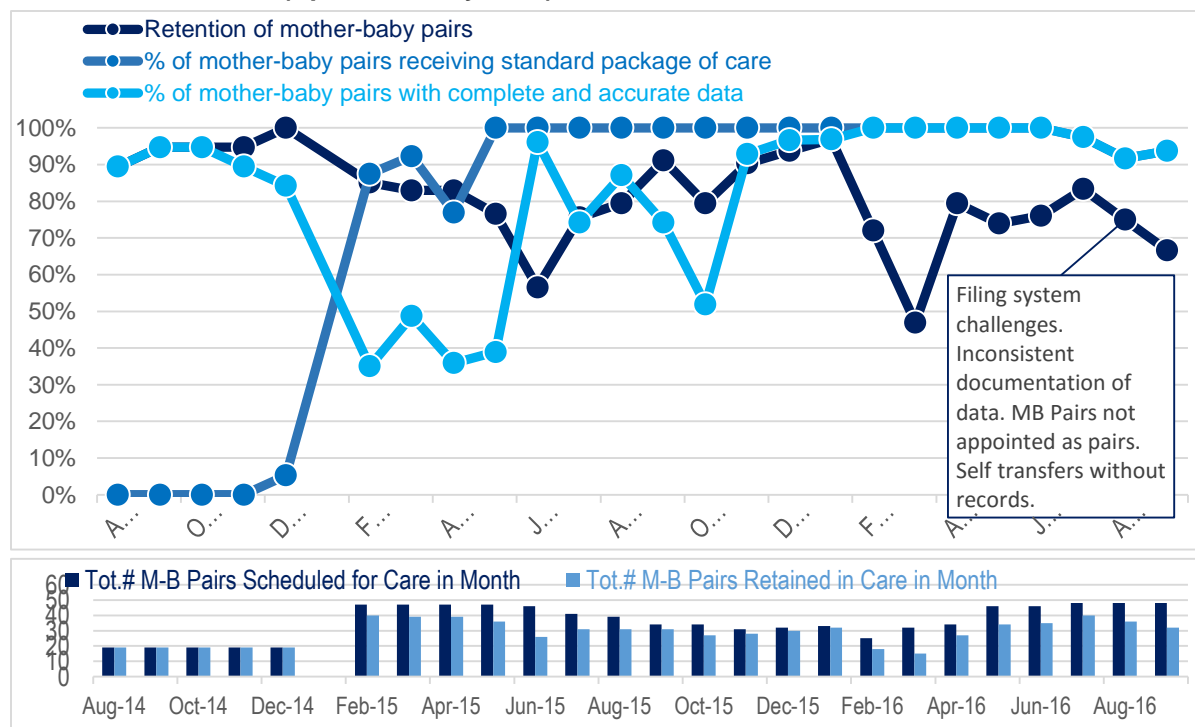


Figure 33. Lesotho: Improving retention, quality of care and data quality, Mofumahali-Oa-Rosari Health Center (April 2014-May 2016)



Activity 2. Strengthen the capacity of DHMTs in five “sustained response districts” (SRDs) to oversee and monitor the quality of services for PLHIV currently enrolled in PMTCT and care and treatment

OVERVIEW

The revised PEPFAR Strategy has defined five districts as being “sustained response districts” (Butha-Buthe, Mokhotlong, Quthing, Qacha’s Nek, and Thaba-Tseka). For these five districts, PEPFAR has defined a maintenance package as a core package of HTC, PMTCT, and ART services and support for COP 15. The districts collectively serve 22% (22,717) of the total number of PLHIV receiving ART in Lesotho. Under the revised strategy, these districts will not be prioritized by PEPFAR for accelerated epidemic control and as such will receive only the maintenance package.

The mandate from PEPFAR is that support in the SRDs should focus on building the capacity of the DHMTs to oversee and monitor the quality of services for PLHIV currently enrolled within the treatment cascade. ASSIST support is therefore focused on providing assistance to the DHMTs to set site- and district-level targets for prevention, care, and treatment and PMTCT services. The DHMTs will also be supported to define quality improvement benchmarks for monitoring site-level quality of care with respect to uptake of treatment/services, adherence, retention, clinical outcomes, and routine laboratory testing.

KEY ACCOMPLISHMENTS AND RESULTS

- **ASSIST provided on-site QI and PHFS training at two health centers (Mohlanaapeng in Thaba-Tseka District and St. Paul in Butha-Buthe District)** (Sept 29, 2015 – Oct 1, 2015). Given high staff turnover rates, it was necessary to introduce staff in the poorer-performing facilities to the basics of QI and PHFS to equip them with the necessary skills to maintain the work.
- **ASSIST provided support for coaching visits in 12 health facilities in three districts** (Oct – Dec 2015). To improve the retention of mother-baby pairs in care, ASSIST continued to provide technical support to district coaches to ensure that the standard package for mother-baby pairs (which includes ART for the mother, Cotrimoxazole or Nevirapine for her baby, infant and young child feeding counselling, nutrition assessment, and an appointment for the next visit) is being implemented at all 12 health facilities.
- **Organized and undertook a learning and sharing session/meeting for district coaches from the three PHFS districts and 11 health facilities** (Oct 14-16, 2015). The purpose of the meeting was to facilitate sharing experiences in the implementation of the PHFS activity in the pilot sites. A secondary purpose was to prepare the districts of Thaba-Tseka and Butha-Buthe (both of which are now categorized as SRD) for the upcoming spread of PHFS into all remaining facilities in the districts. Subsequent to this meeting, all facilities in Butha-Buthe and Thaba-Tseka are undertaking QI projects under the auspices of PHFS.
- **PHFS scale-up training at Butha-Buthe hospital** (Dec 15-18, 2015). With the requirement for an exclusive focus on SUDs after March 2016, ASSIST has embarked on a process to “spread” PHFS to all remaining sites/facilities within the three pilot districts. Of the eight remaining sites in Butha-Buthe, seven were able to participate in this training.
- **Financed and technically supported MOH to conduct orientation meetings disseminating new HIV guidelines (“Test & Treat”) in 4 out of the 5 sustained response districts** (May 9-11, 2016).
- **Jointly, with relevant DHMTs, conducted site selection for Phase 1 implementation of QI initiatives** (April 19-22, 2016). The sites were chosen based on the volume of patients seen as well as on the prevailing “quality challenges”.
- **ASSIST conducted a formal training on QI in Qachas’ Nek District** (Aug 31- Sept 2, 2016). The 26 participants included the DHMT members, two hospital managers, health facilities representatives, and one representative from correctional services. The purpose was to capacitate health care workers and DHMT members on QI principles, concepts, and approaches and guide them on how to integrate QI in HIV and other clinical services.
- **The MOH and ASSIST conducted supportive supervision in SRD districts** (Sept 4-9, 2016). The purpose was to follow-up on the implementation of new Test and Treat HIV guidelines and

integration of QI in HIV, using the comprehensive supervision tool jointly developed by the MOH and ASSIST. Out of the targeted 62 facilities, 41 facilities were jointly supervised while the remaining 21 facilities were supervised by MOH alone due to competing activities.

- **Coordination meeting in the SRDs** (Aug 10-11, 2016). ASSIST participated in two PHC meetings at Thaba Tseka and Butha-Buthe. Participants included DHMTs in these two districts and all health facilities within those districts. The purpose was for all health facilities to present their performance and gaps as well as learn from the best-performing facilities. The sustained response districts were guided on how to establish QI teams at both the district and facility levels. The expected number of teams is 61, but the number of functional teams at the end of FY16 is 34. The remaining teams for the facilities are in development, however there are challenges with owning QI in the facilities. Most health workers still view QI interventions as an added workload.
- **District Improvement Coordinators and M&E officers deployed to the districts are well integrated in the district technical working groups** (Q4). Capacity building is ongoing for DHMTs and health facilities. Significant progress has been made in the Phase 1 facilities in terms of establishing QI teams and starting QI projects. A spread strategy has been drafted that clearly indicates how the spread to new sites is going to be executed.

Key results:

- **Results from 12 PHFS demonstration sites:** As a part of strengthening the linkages along the PMTCT continuum of care, including ANC/MNCH, HIV care and treatment, PMTCT, and HBC services, results from 12 facilities have been disaggregated to show the variety of performance in four faith-based facilities, two government hospitals, and six other government facilities. This reflects efforts to keep mothers and baby in care (**Figure 34 and Figure 35**) and provide mother-baby pairs a standard package (**Figure 36**).

Figure 34. Lesotho: Percentage of mother-baby pairs retained, 12 PHFS sites (Nov 2013-March 2016)

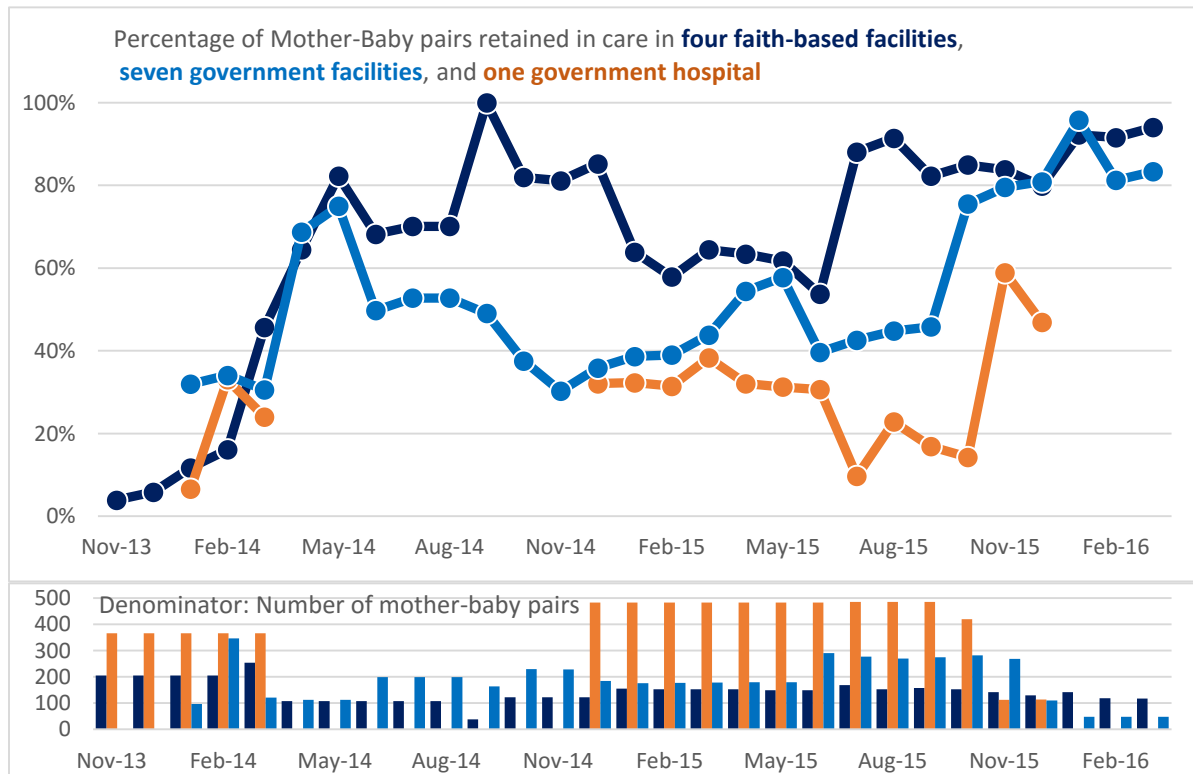


Figure 35. Lesotho: Retention of mother-baby pairs, Paray Hospital (Sept 2013-March 2016)

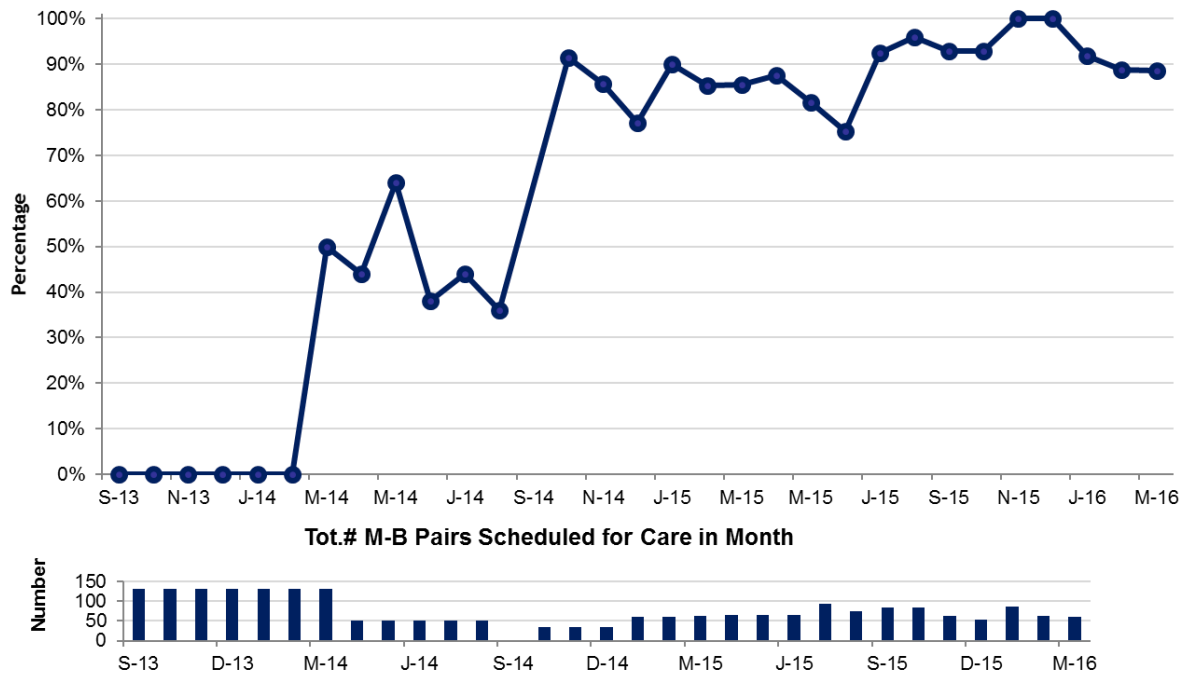
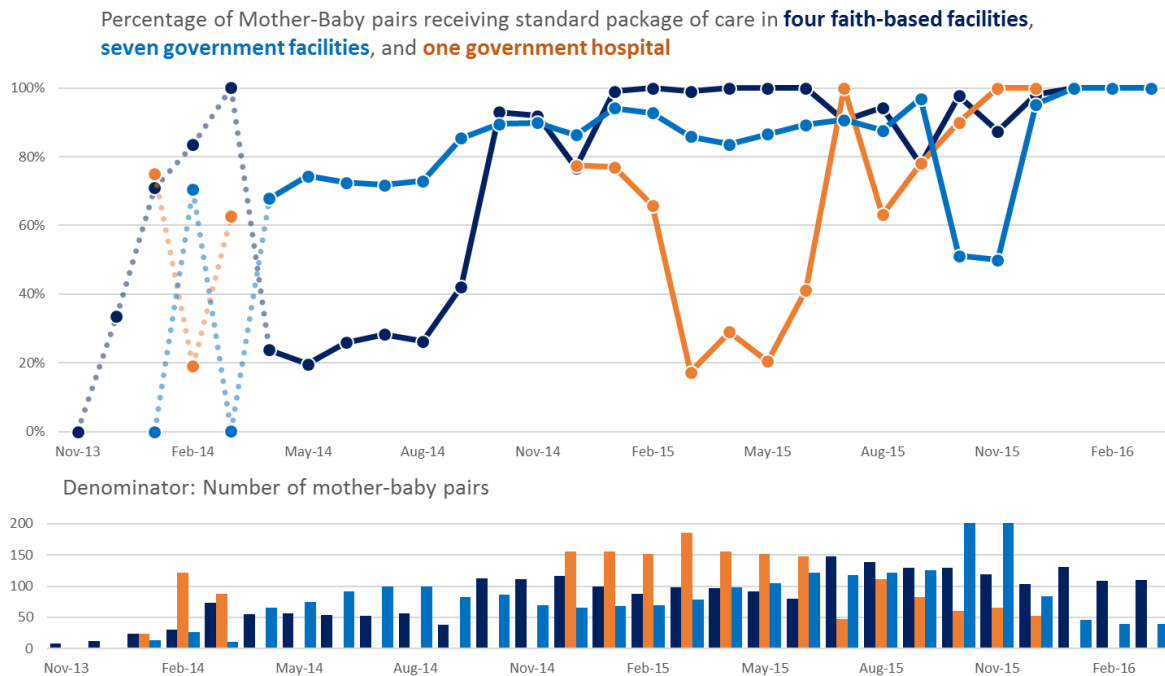


Figure 36. Lesotho: Percentage of mother-baby pairs receiving standard package of care, 4 faith-based facilities, 2 government hospital, and 6 other government facilities (Nov 2013 – Feb 2016)



Activity 3. Build capacity for national level QI program coordination and management

OVERVIEW

The national QI program is ultimately the responsibility of the Senior Management of the MOH. Oversight responsibility for the coordination of the development, implementation, and monitoring and evaluation of QI plans is vested in senior management. Senior management, clinicians, DHMTs, and site staff should be engaged in its development. Senior management should ensure that the targets set out in the QI program are met. Given the “newness” of QI in the MOH, as well as the attendant responsibility that Senior Management in the Ministry has in this regard, it was felt necessary to include a component that would ensure that the MOH develops capacity, across all its functions, for QI.

KEY ACCOMPLISHMENTS AND RESULTS

- **ASSIST-MOH plenary meeting** (Nov 29 – Dec 1, 2015). This meeting was organized to facilitate a review of the indicators currently in use in Lesotho for PHFS. It was felt that the three indicators in use did not adequately enable an assessment of progress towards the attainment of PHFS goals and objectives. To that end, additions were made to the list of indicators to be collected. The meeting also had the objective to develop a standard approach to the collection of data on indicators given the wide disparity in results related to data quality. The third objective of the meeting was to update the PHFS database to make it complete up to the end of FY15.
- **The piloting of the standardized data collection tools was successfully undertaken at 2 facilities in Mphahle's Hoek (Mpharane Health Center and Tsepo Health) (Q2).** The tool has now been approved for use throughout all facilities collecting data on services for mother-baby pairs.
- **Contribution to MOH training on eMTCT** (Dec 9, 2015). ASSIST oriented health workers from the districts of Mafeteng and Mphahle's Hoek (both scale-up districts) on QI principles and approaches, and their potential role in the elimination of MTCT. As a result of the meeting, ASSIST was requested to orient all DMHTs on this aspect during the regularly district supervisory visits. Both districts were visited during the month of January 2016.
- **Two members (Director, Primary Health Care, and Manager, Clinical Nursing Services) of the Senior Management of MOH were supported by ASSIST to attend a “Quality Improvement Framework Review Meeting” hosted by the MOH of Uganda** (April 18-22, 2016).
- **Held quarterly progress review meetings jointly with the MOH QA unit** (April 12, 2016).
- **Three MOH/QA members provided in-house training on QI facilitated by ASSIST** (April 4-7, 2016).

Activity 4. Quality improvement in OVC programming

OVERVIEW

Consistent with the PEPFAR 3.0 and COP 15 OVC Technical Considerations, the technical focus of ASSIST QI work for OVC services in Lesotho has been on core and near-core interventions for most vulnerable children and adolescent girls, building resilience in children and families, preventing HIV infections, identifying HIV-positive children, and linking and retaining those children in care and treatment. With an emphasis on family-centered socio-economic interventions, ASSIST aims to improve processes of care such as case management, referrals and linkages, and the coordination of care between government and service delivery partners.

KEY ACCOMPLISHMENTS AND RESULTS

Start-up Activities

- **Recruitment and orientation of OVC ASSIST team** (Q1).
- **Developed scope of work, reviewed and approved by USAID Lesotho and the Ministry of Social Development** (Q1).
- **Organized and attended several meetings with the MOSD, including a National OVC Coordinating Committee quarterly meeting, to introduce the program** (Q1).

- **A Memorandum of Understanding detailing the nature of the relationship between the MOSD and ASSIST has been approved and signed by the Principal Secretary in the MOSD (Feb 2016).**

Issue and manage FOGs to local organizations

- **Conducted capacity assessment for the consortium partners who received funding from BLC (Q1).**
- **Request for Applications (RFA) was drafted and submitted for review (Q1).** These requested local organizations to apply for fixed obligation grants (FOGs) for the provision of services at selected councils in the five Sustained Response Districts. These were then posted in the local media in January 2016. Seventeen (17) applications were received during the month of February, and eight organizations were selected for grant award.
- **Target definitions for all District Councils have been completed, and each grant recipient was made aware of the targets for their organization (Q2).**
- **Issue and manage fixed obligation grants to local organizations.** After signing of the contractual agreements for the 8 sub-grantees in April, the first disbursement of funds to partners was paid out (April and May 2016). Grant agreements for 8 sub-grantees were later reviewed and amended to take into consideration time delays for project start, leading to the revision of the 2nd and 3rd milestones and deliverables. The revisions were approved and signed (May 2016).
- **The Non-US Pre-Award Assessment Survey (NUPAS) was undertaken to assess the financial and management capacities of the 8 sub-grantees (June 2016).** The activities involved organizational self-assessment (May 31 – June 10, 2016); in-country assessment (June 20-24, 2016); needs-based training to address gaps (June 27-30, 2016); and subsequent action planning. Data and financial verification processes were conducted on all sub-grantees before payments were disbursed.
- **Two sub-grantees, LIRAC and SWAALES, were supported with standard psychosocial training package for their secondary caregivers or caseworkers, conducted by REPSSI facilitators (Sept 2106).** REPSSI is a partner of ASSIST.

Build capacity of the Ministry of Social Development (MOSD) at central and local levels to coordinate and sustain effective and timely interventions

- **Knowledge exchange visit undertaken to Malawi (included ASSIST program staff as well as Director of Children’s Services and OVC coordinator from the MOSD) (Feb 2016).**
- **Development of terms of reference for ASSIST District Improvement Coordinators (DICs) for their deployment to the districts. They are placed in offices of MOSD to reinforce coordination capacity and that of sub-grantees (June 2016).**
- **3 Community Councils (CCs) in 2 districts were identified for testing of QI by the URC OVC team.** One CC QI team was set up in one council, where the improvement aim and a change idea were chosen for testing (improving the performance of a group of primary school OVC through homework) (April 2016).
- **All 5 districts’ DCPTs, District and Urban Councils have been oriented on the ASSIST OVC QI project, and all have set up inter-sectoral District QI teams.** Two QI teams have received QI training, facilitated by external technical assistance (May 2016).
- **Held a strategic program orientation and advocacy meeting with the new Principal Secretary of the MOSD (Aug 2016).**
- **Provided technical and financial support to the annual DCPT Peer Review Meeting forum where all 10 DCPTs convene to share learning and review individual progress (Sept 2016).**

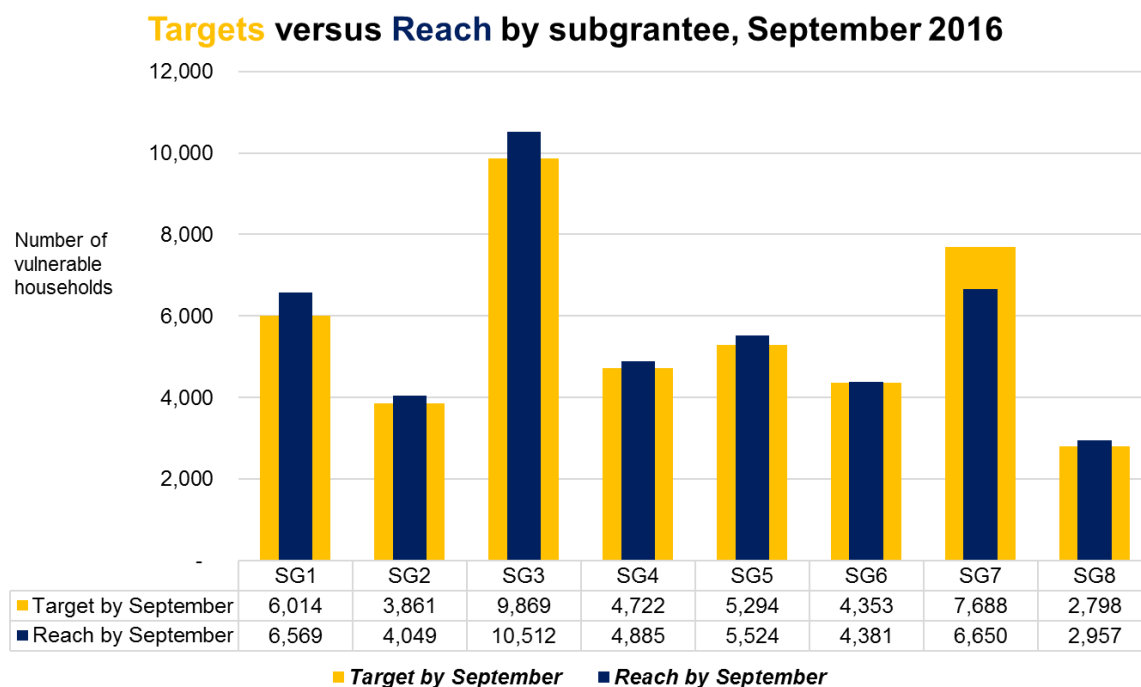
Improve the well-being of vulnerable children through accessing quality essential services in five priority districts

- **Convened Case Management workshop with MOSD staff (managers, child welfare officers and auxiliary social workers), program managers, and M&E staff from the 8 sub-grantees. Data collection tools have been designed/adapted for use by partners (May 2016).**
- **All project tools have been developed and shared with partners for identification and prioritization of households to determine “most vulnerable” and for assessment of**

individual beneficiaries for provision of needs-based services (June 2016). These tools include:

- Lesotho Vulnerable Household Identification Tool (LVHIT)
- Guidelines for Administering the OVC Vulnerability Prioritization Tool (VPT)
- Action Record (AR) -- this is for use by service providers to whom OVC and caregivers have been referred
- Child Assessment and Care Plan Tool (CACPT)
- Vulnerable Household Selection Form (VHSF)
- SOP for Case Management
- Health Services Referral Form (HSRF)
- Project Databases: Household Prioritization, Assessment and Care Plan, and Service provision
- **Partners conducted trainings for their secondary-level caregivers on the project tools developed** (June 2016).
- **Sub-grantees introduced themselves and ASSIST to the Community Councils within which they are active.** They further obtained acceptance or acknowledgement letters to submit to URC as a deliverable and proof of their undertaking to introduce the project and themselves to the CCs (June 2016).
- **All partners embarked on the identification and registration of vulnerable households using the LVHIT.** This was undertaken in all 49 Community Councils (June 2016). See **Figure 37** showing their progress in registering, assessing, and setting up care plans with vulnerable households.
- **Partner learning session conducted to review progress and address challenges** (Aug 2016). ASSIST met the target of reaching over 44,597 beneficiaries with the following services: education, protection, parenting programs, economic strengthening, linkage to HIV services, nutrition, and psychosocial services.
- **5 community QI teams established in Leribe District with the aim of improving nutritional status of 10 households through homestead gardens** (Aug - Sept 2016)
- **1 community QI team established by Leseli CBO in Sebelekoane Mafeteng District** (Aug 2016).
- **Developed a documentation journal for the Berea QI team** (Q4).

Figure 37. Lesotho: Progress among sub-grantees in registering and developing care plans for vulnerable families, 8 sub-grantees (Sept 2016)



IMPROVEMENT IN KEY INDICATORS

During Q4, data quality was an issue generally in the MOH because the tools used for data collection (the U-5 registers) were out-of-stock. The MOH has indicated that these have just been reprinted and are due to be distributed to facilities in September. ASSIST is assisting MOH with distribution of the newly-printed registers.

The updated information in the table below (updated to August 2016) comes from facilities that used improvised registers to continue collecting information for that month.

Indicators	Facility	Baseline (April 2014)	Dec 2015- March 2016	Most recent for 3 sites		Most Recent (date)
				April 2016	May 2016	
Retaining mothers and babies in care: Percentage of eligible mother-baby pairs who receive ART and under 5 care each month	MOHALE'S HOEK DISTRICT					August 2016
	Nts'ekhe Hospital	17% (486) Sept 2015	47% (113) Dec 2015			No data
	Morifi Health Center	58% (19) Apr 2014	91% (22) Mar 2016	76%	61%	No data
	Lithipeng Health Center	58% (26) Apr 2014	77% (26) Mar 2016	92%	92%	No data
	Mofumahali-Oa-Rosari Health Center	89% (19) Apr 2014	100% (48) Mar 2016	75%	67%	No data
Data quality: Percentage of mothers and babies whose	Nts'ekhe Hospital	63% (82) Sept 2015	100% (53) Dec 2015			No data
	Morifi Health Center	77% (13) Sept 2015	100% (20) Mar 2016	96%	90%	No data

Indicators	Facility	Baseline (April 2014)	Dec 2015-March 2016	Most recent for 3 sites		Most Recent (date)
data are accurately and completely filled by the end of the month	Lithipeng Health Center	95% (21) Sept 2015	100% (20) Mar 2016	100%	100%	No data
	Mofumahali-Oa-Rosari Health Center	97% (32) Sept 2015	83% (48) Mar 2016	92%	94%	No data
Routine visits: Percentage of mother-baby pairs who attend under 5 and ART clinics and receive the standard package of services	Nts'ekhe Hospital	78% (82) Sept 2015	100% (53) Dec 2015			No data
	Morifi Health Center	100% (13) Sept 2015	100% (20) Mar 2016	96%	90%	No data
	Lithipeng Health Center	100% (21) Sept 2015	100% (20) Mar 2016	100%	100%	No data
	Mofumahali-Oa-Rosari Health Center	100% (32) Sept 2015	100% (48) Mar 2016	92%	94%	No data

GENDER INTEGRATION

Gender has not yet been fully integrated into formal QI trainings. The nature of the pandemic in Lesotho (women disproportionately more affected and infected than men) means that gender is integral to all discussions during trainings, supportive supervisory visits, and meetings. Participants for all trainings have their gender recorded. Health care workers are also mentored to identify gender-related challenges (e.g., with implementation of test and treat women refused to take ART as they have to seek permission of their husbands first). In such cases, change ideas targeting male involvement are implemented (e.g., social mobilization targeting males). We anticipate OVC gender workshops will be conducted in 2017 Q2 and will address the topic of gender-based violence.

SUSTAINABILITY AND INSTITUTIONALIZATION

ASSIST is supporting the MOH to establish QI teams at the different levels of the health care system. This serves to ensure that QI becomes entrenched within the MOH in all its activities. In addition, ASSIST will support the establishment of a QI Technical Working Group whose membership shall include the major health-related development partners, as well as key implementing partners under the PEPFAR/USAID/CDC umbrella.

Within the context of the revised PEPFAR strategy, ASSIST has embarked on a process to provide intensive capacity building support to the DHMTs in the SRDs to enable them to undertake their oversight responsibility over the health centers. To that end, ASSIST initiated preparations for a capacity assessment to determine baseline capacities in the areas of supportive supervision, development of annual work plans, performance appraisal, and coaching and mentoring. The findings of the assessment shall be used to develop a capacity-building program to address the gaps that will be identified.

MALAWI

BACKGROUND

Malawi has an estimated population of 16 million. The country's HIV prevalence rate is 10.6%, with one million people living with HIV. More than half (58%) of those infected are girls and women. The pandemic continues to infect 10,000 people a year, and approximately 46% of new infections occur among young people aged 15-24 years. According to the Joint United Nations AIDS Program (UNAIDS) there were 34,000 new HIV infections in 2014 in Malawi and among these 7,400 were children aged below 14 years (Malawi AIDS Response Progress Report, 2015).

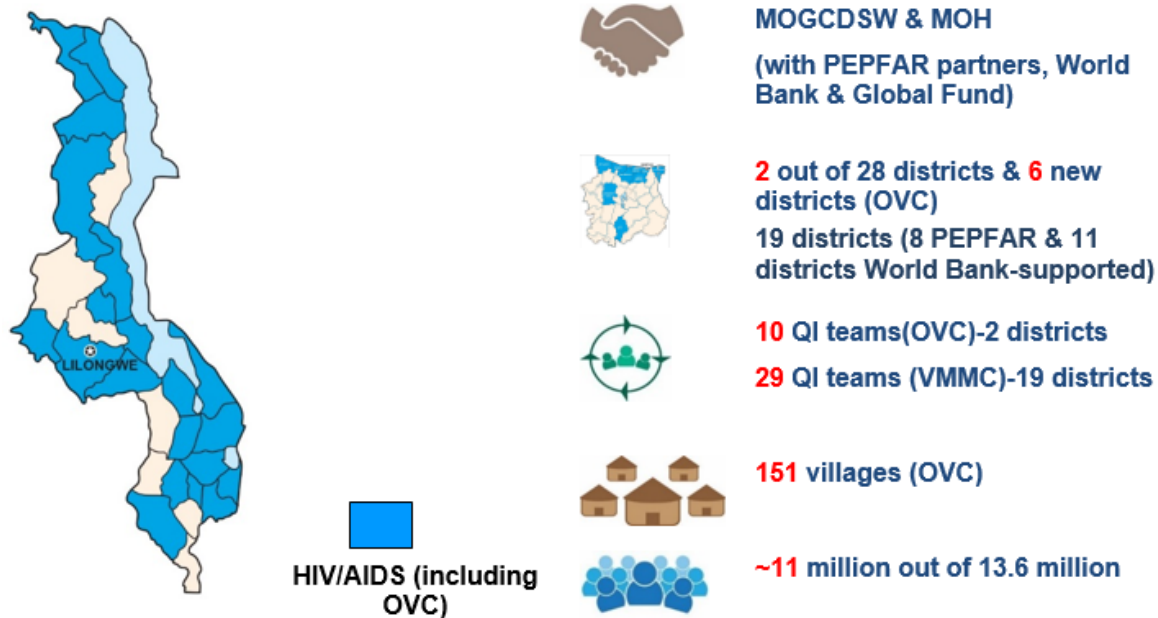
The disease impacts thousands of families, leaving a growing number of children affected by HIV and AIDS. This has led to an increase in the number of orphans and vulnerable children (OVC) in the country, now standing at 1.8 million (Malawi National Plan of Action, 2015-2019). Almost half (49.6%) of Malawi's girl children are married off before their 18th birthday and 10% of boys and girls aged 6-13 years are not in school (Malawi Violence Against Children Survey, 2013). As a result, OVC and their families in Malawi are faced with a myriad of challenges including access to essential services such as health, education, economic wellbeing, and protection

In 2009, the USAID HCI Project, with support from the USAID Mission in Malawi and PEPFAR, supported the Ministry of Gender, Children, Disability, and Social Welfare (MOGCDSW) to develop quality standards aimed at guiding the delivery of services provided to vulnerable children in Malawi. The Ministry endorsed the standards and recommended their scale-up. Starting in FY13, with support from the USAID ASSIST Project, the MOGCDSW has mobilized 191 villages through 10 community QI teams in improvement work in two districts of Balaka and Mangochi.

In FY16 ASSIST Malawi partnered with the One Community Project lead by JHPIEGO in six new districts to comprehensively support vulnerable communities being targeted by the project. In addition, in FY16 ASSIST's work expanded to improve the quality and safety of voluntary medical male circumcision (VMMC) in 17 PEPFAR-funded sites supported by JHPIEGO and PSI in eight districts in the country. During this fiscal year, ASSIST has also been supporting the MOH on the integration of CQI in MOH sites funded by World Bank Project.

USAID ASSIST's activities in Malawi are aligned to USAID's Country Development Cooperation Strategy (CDCS, 2013-2018) Development Objectives of improving social development, increasing sustainable livelihoods, and exercising citizen's rights. In FY16 USAID ASSIST is contributing to the PEPFAR 3.0 key agendas particularly on promoting sustainability, partnerships and impact. USAID ASSIST's activities are also aligned to the Malawi National Strategic Plan (2011-2016) that endorses Voluntary Medical Male Circumcision (VMMC) as an important HIV prevention strategy for the country to avert new HIV infections.

Scale of USAID ASSIST's Work in Malawi



PROGRAM OVERVIEW

What are we trying to accomplish?	At what scale?
2. Improve quality of services for vulnerable children and their families	
<ul style="list-style-type: none"> Build the capacity of ten communities to sustain evidence-based effective changes as model sites for learning of new communities Improve the percentage of vulnerable children accessing quality essential services in six new districts through collaboration with One Community Project using evidence based change package developed in FY15 	<ul style="list-style-type: none"> 2 districts (Balaka and Mangochi) 5/9 Traditional Authorities in Mangochi and 2/8 Traditional Authorities in Balaka 10 community teams 6 new Districts with One Community Project (Chikwawa, Blantyre, Zomba, Phalombe, Machinga, Mulanje) Catchment population: 173,399 (of 316,748 total population of Balaka District) 155,912 people (of 803,602 total population of Mangochi District)
3. Improve the quality and safety of Voluntary Medical Male Circumcision (VMMC)	
<ul style="list-style-type: none"> Improve the quality and safety of VMMC services provided by the MOH in selected accredited high-volume sites Build the capacity of VMMC facilities to continuously improve the quality and safety of VMMC services at the site level 	<ul style="list-style-type: none"> 19 districts (8 PEPFAR-supported + 11 districts World Bank-supported) 29 QI teams (12 USAID, 5 DOD, 12 World Bank supported sites)

Improvement Activity

Activity 1. Improve quality of services for vulnerable children and their families

OVERVIEW

HIV and AIDS are affecting many families, particularly children, due to either death of parents or chronic illnesses within the families. Without parental protection, vulnerable children are exposed to neglect, abuse, and exploitation, and lack access to basic necessities and services such as education. Due to numerous challenges facing vulnerable children in communities, schools, and households, only 20-26% of the children complete the entire primary school education, even though the enrolment rate in the first two grades is high (UNICEF, 2010). Children leave school for a myriad of reasons, including poverty, failure to pass from one class to the next, long distances to school, becoming pregnant, poor quality of education, the school environment, overcrowded classrooms, and absence of sports and play areas in the schools. ASSIST provides technical assistance to the MOGCDSW by supporting 10 communities to improve the welfare of vulnerable children and their families, using modern quality improvement techniques.

KEY ACTIVITIES AND RESULTS

- Provided support to 10 QI teams through on-site coaching visits** (Nov 2015, March 2016, and Sept 2016). The MOGCDSW with support from ASSIST conducted on-site coaching visits to build the capacity and skills of social service providers to use QI in their work. Teams were also assisted to provide care and support to vulnerable children according to their various vulnerability situations. The MOGCDSW supported the teams on data management to ensure that records are up to date and valid. In September, a team comprising the MOGCDSW and ASSIST conducted field coaching visits to six QI teams in the two districts to follow up on progress of the improvement activities. The team provided feedback to the six out of ten visited teams on the following main topics:
 - Using the population data to inform future programming of their interventions to maximize the limited available resources.
 - The teams were encouraged to use an integrated approach in programming rather than isolating certain interventions, as for example the social cash transfer in which the

Government of Malawi provides cash to families living in severe poverty to cover costs of school materials. Such interventions should be seen as part of a complete package of social services offered to vulnerable families in addition to the social services offered by communities.

- To move away from only testing economic strengthening interventions to implementing the effective interventions in additional households.
- Emphasized detailed documentation of changes tested so that teams can keep track of what they did to improve a certain service area.
- QI team members were encouraged to be models in the communities they work in to help community members emulate the evidence-based interventions that volunteers have tested at their household level.
- The District Social Welfare Offices (DSWO) committed to have Social Welfare Officers visiting the community QI teams to coach them on service areas needing technical support.
- Child marriages, video screenings, hunger and absenteeism were some of the common challenges experienced in most schools the project worked with, as reported by the community QI teams.
- The teams were encouraged to document and track the children who get a high pass on their final exams and proceed to secondary school in all the targeted schools. This data will be disaggregated by sex.
- The teams were encouraged to move on testing changes to improve HIV diagnosis and improving ART adherence of vulnerable families. It was encouraging during the field visits to note that almost all the teams had developed the improvement aims on contributing towards to HIV elimination goal of 90-90-90.
- Teams were also encouraged to track girls' and women's participation in education, economic strengthening and health activities to ensure all ages of women benefit from the improvement work that the teams are working on.
- **Held national and district level meetings with education managers (Q1).** ASSIST met with the Ministry of Education to provide a project update on some of the successes accomplished by the community QI teams in Balaka and Mangochi districts. The meetings were also held to encourage the Ministry of Education to support the QI teams' efforts at the community level through supervision, and financial, material and staffing of primary schools. The meetings were held at both national and district levels. At the district level, the District Education Manager's offices in Mangochi and Balaka showed their willingness to be involved in QI activities such as learning sessions and coaching visits whenever possible.
- **Identified challenges to improve delivery of psychosocial activities for vulnerable children (Q1).** The Malawi Government endorsed the use of Children's Corners (CC) as a means of building resilience and coping mechanisms in children. CCs are community structures that provide after-school and Saturday enrichment programming for vulnerable school children from kindergarten age through Form 4. These programs are run by a volunteer workforce of villagers with limited education and literacy. Recognizing that CC volunteers require training and support to effectively facilitate CC activities, the Office of Orphans and Vulnerable Children within the MOGCDSW developed the CC Facilitator's Guide that is currently being piloted in some CCs in selected districts.
- **ASSIST engaged REPPSI with support from University of Washington's (UW) group of professors (Ann Vander Stoep, Laura Kastner and Elizabeth McCauley) to conduct a situation analysis on the processes currently used to implement CCs in Malawi and to develop an assessment protocol for CC facilitators to use in assessing psychosocial needs of children (Q1).** Insights generated by these activities will have broader relevance to community-based programming for vulnerable children. The results were shared in March with national decision-makers, program implementers, and other stakeholders, including UNICEF, USAID, and MOGCDSW to promote learning about what works to improve psychosocial well-being of vulnerable children.
- **Conducted OVC end-line data collection in intervention and control villages.** In February 2015, the MOGCDSW with support from ASSIST planned to scale up improvement work to five more communities in Mangochi and Balaka districts. Before scaling up to the new communities,

ASSIST Malawi conducted a baseline survey in 20 selected villages (10 control and 10 intervention sites) to document the situation of vulnerable children and their families on several service areas namely (i.e., health, education, child protection, household economic wellbeing, and food security) before the QI teams intervened in the vulnerable households. Data was collected and electronically entered using Poi mapper plus application which was supported by ASSIST headquarters (Simon Hildebeitel and Sara Smith). Data analysis is in progress and results will be shared with USAID Mission, the Ministry, the community QI teams as well as the two districts.

- **The MOGCDSW with support from ASSIST conducted two learning sessions for 10 community QI teams** (Feb 22-25, 2016 and June 21-24, 2016). During this learning session, seven representatives from each of the ten communities were brought together to share best practices and to learn from each other on their improvement experiences. The session was attended by 51 males and 19 females from the QI teams. In attendance were also representatives from the Balaka and Mangochi social welfare offices and the Director of Child Affairs in the MOGCDSW. Two officers from the MOGCDSW in collaboration with ASSIST facilitated the session. The session focused on refining the education performance, household economic strengthening improvement plans as well as refining the community health linkages. The main aim of the second learning session was for the teams to share their experiences on the quality processes they followed to improve their community data management. A total of 71 (48 males and 23 women) QI team representatives attended the learning session. The teams also reviewed their improvement plans to revise and add more changes to test in their communities on the three service areas they are focusing on.
- **National level meetings with One Community Project.** ASSIST is collaborating with the One Community Project to provide technical assistance to communities in the six new districts to improve the quality of social services in these districts. ASSIST engaged in high level meetings from February 21-22, 2016 with the project management where ASSIST shared how it uses the QI approaches to improve social and health services particularly for vulnerable children and their families. ASSIST also engaged the One Community Project in discussions on working with already established ten community teams in the two targeted districts of Mangochi and Balaka.
- **Learning visit for Lesotho Ministry of Gender and Social Development and USAID ASSIST staff.** From February 28th -March 4th, 2016, Malawi hosted a team of six officials from the Lesotho Ministry of Gender and Social Development and USAID ASSIST team from Lesotho for a knowledge sharing and exchange visit. ASSIST in collaboration with the MOGCDSW facilitated the teams' meetings in Lilongwe with the Principal Secretary at the Ministry of Gender, the Director of Child Affairs, District Commissioners in the two districts and District Social Welfare Officers. The team also proceeded to visit three Community QI teams in Balaka and Mangochi to learn how the community teams were set up, how they started, what they were working on, and the results achieved to date with support from ASSIST. The Director of Child Affairs accompanied the delegation in all the site visits as well as the debriefing meeting with the Principal Secretary on the final day.
- **ASSIST supported th MOGCDSW to conduct Data Quality Assessments with 10 quality improvement teams in Mangochi and Balaka Districts** (April 10-15, 2016). The purpose of the data validation exercise was to review the quality of data that the teams submit to the ASSIST Project as well as to the districts. The team of assessors reviewed the available data with the following specific objectives:
 - Check for uniformity between QI team, ASSIST and the District Social Welfare Office data sources;
 - Review the processes QI teams use to collect data in their communities;
 - Review how data is analyzed and used at community level; and
 - Identify gaps for improvement in these areas to ensure quality of data at all levels.
- The MOGCDSW supported by ASSIST led the exercise with District Social Welfare Officers in both districts. The results of the data quality assessments showed that although QI team data mostly matched with ASSIST's data, there were gaps in documentation and processes teams used to collect and analyze their data. The assessment also showed that there were

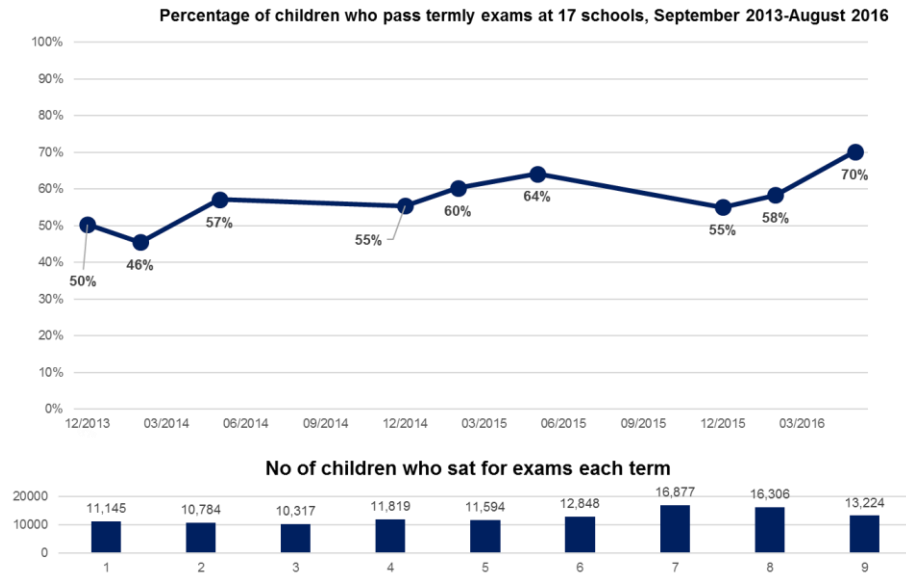
no copies of the QI team reports at the two DSWOs. During the visits, the coaches worked with the teams to develop action points for the teams and the DSWOs.

- **Supported the Balaka and Mangochi districts in data quality management processes.** After identifying gaps during the data quality assessment visits in the 10 QI teams, ASSIST supported the MGCDSW to visit the teams to review progress made on the action points made to improve data quality (May 10-15, 2016). The activity was conducted by ASSIST, MGDSW and the DSWOs in Balaka and Mangochi. During these visits, the coaches reviewed the action points agreed upon during the assessment visits and supported the teams on how data collection, compilation and analysis can be improved. The Director of Child Affairs joined the team of coaches and emphasized the importance of quality data management to the QI teams in the two Districts.
- **Conducted QI training of new targeted districts stakeholders in the new districts.** ASSIST supported the MOGCDSW to conduct a quality improvement training for stakeholders in six districts supported by the One Community Project from April 18-21, 2016 at Luchenza in Thyolo District. A total of 59 (41 males and 18 females) government district stakeholders from Blantyre, Chikwawa, Thyolo, Mulanje, Phalombe, Zomba, and Machinga attended the training. For each district, seven district government stakeholders from the District Social Welfare Office, District Health Officer, District Agriculture Development Office, District Education Office, and District Local Government Office attended the training. At the end of the training, the district stakeholders were encouraged to form district QI teams to support the One Community Project activities at the community as well as the district level.
- **Conducted QI orientation for One Community Project Management team.** ASSIST in collaboration with the One Community Project conducted QI orientation meetings for the project specialists, advisors, managers and district staff on 2nd and 9th June 2016 in Blantyre and Balaka Districts respectively. Over 40 One Community Project staff were trained in QI methods.
- **Conducted follow up with ten QI teams on targeted population and health data** (July 2016). ASSIST supported the 10 community QI teams in the Balaka and Mangochi Districts to review and document their population data to be disaggregated by sex, age and location for all the service areas being implemented. This was done to confirm the vulnerable beneficiaries' population information the teams have to use to inform programming and improve their targeting of the right beneficiaries with the right services.
- **Conducted QI training of community facilitators (CFs) in Zomba, Thyolo, Chikwawa and Mangochi Districts** (Aug 6-12, 2016). ASSIST supported the MOGCDSW to conduct four training sessions of the QI trainings for community facilitators in Chikwawa, Mangochi, Zomba and Thyolo Districts. A total of 120 community facilitators were trained in these four sessions in QI approaches and techniques.
- **Supported the MOGCDSW to print additional copies of the OVC minimum standards for dissemination in newly targeted districts and community teams** (Aug 2016). ASSIST supported the MOGCDSW to print additional 500 copies of the OVC minimum standards to distribute to new districts as well as newly trained teams to support their improvement efforts in various service areas and communities.

Results

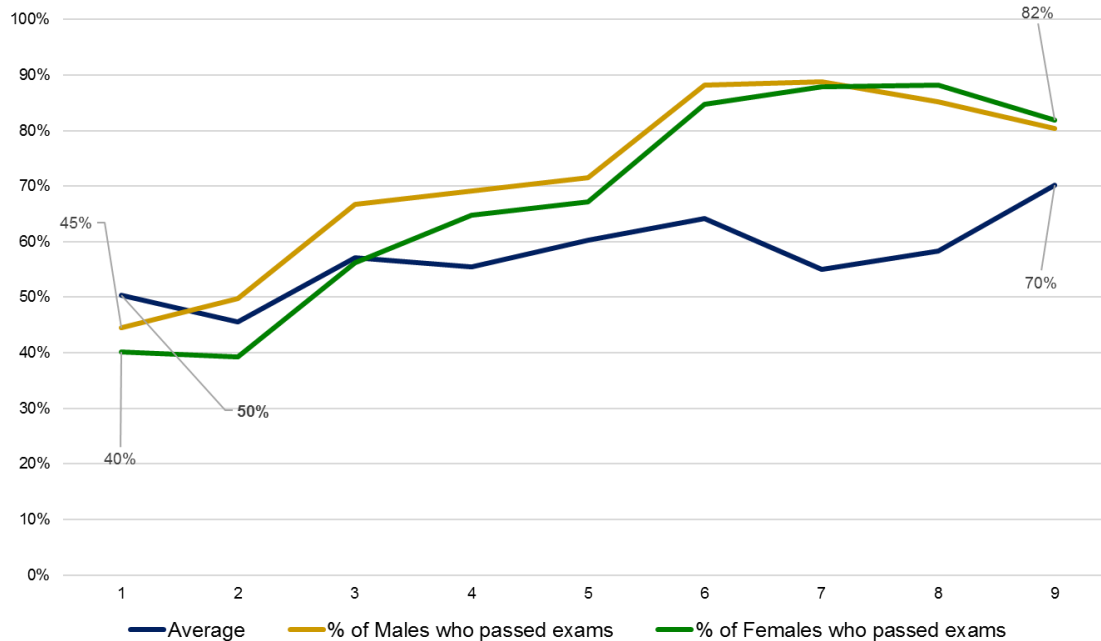
- **Education:** During FY16, the QI teams supported 20 primary schools in the two districts to improve the academic performance of the pupils by supporting the schools to test and implement child, school, and community level changes. By the end of the fiscal year, academic end of term test results showed that 17 out of 20 primary schools had an average pass rate of 70% compared to the baseline of 58% in 2013 (see **Figure 38**). Thirty-five percent (35%) of the targeted schools are above the average of 70% among the 17 primary schools in the two districts. These education data continue to be collected and analyzed by sex and by class.

Figure 38. Malawi: Percentage of children who pass termly exams, 17 schools (Sept 2013-Aug 2016)



- Chilore is one of the four primary schools that has shown results above the average of 15 schools. Chilore Primary school has managed to improve the education performance over six terms but also reduced the performance gap that existed between boys and girls in termly performance. The team introduced changes such as weekly assessments and early classes for standard 6 and 7. The teachers paid more attention to the girls' performance and encouraged them to improve their grades. As the team tested and implemented these changes, the gap that existed during Term 1 between boys and girls finally closed as seen in **Figure 39**.

Figure 39. Malawi: Percentage of boys and girls who passed exams, Chilore primary school, term 1-9 compared to average pass rate of 17 schools (2013-2016)

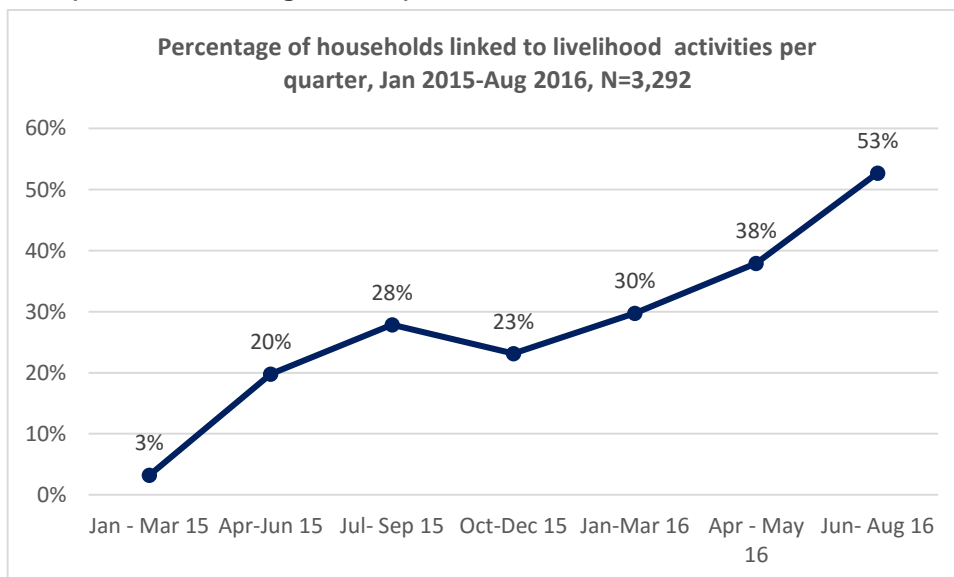


- **Household economic strengthening:** During FY16, the MOGCDSW with support from ASSIST supported the 10 community QI teams to build the capacity of 3,292 guardians in vulnerable

households to improve food security and household economic wellbeing hence promoting resilience among vulnerable families. The goal was to ensure that vulnerable households have enough food for the rest of the year particularly during food scarce months of October-February. Guardians were taught how to access money to meet important family needs such as access to food, health and education and scholastic materials for their children.

- The 10 teams conducted discussions with vulnerable families to encourage them to participate in food security and economic strengthening activities, and also linked them to available services or projects available in their communities. The teams continued to support the vulnerable households to improve food security and household economic wellbeing, hence promoting resilience among 23% during Oct – Dec 2015 to 53% in the June-Aug 2016 period (see **Figure 40**). It is also important to note that the denominator is cumulative across the quarters.
- Anecdotal evidence shows that families are becoming self-reliant and able to cope with seasonal adversities. Some of the interventions the teams engaged the VHHs to improve the food availability and economic status of their households included: Establishing kitchen gardens; linking VHHs to NGOs supporting economic strengthening activities; and supporting households to begin using modern methods of farming as they prepare for the growing season. January through March is usually a rainy season, however in recent years, Malawi just like neighboring countries in the sub-Saharan countries have been consistently affected by adverse effects of climate change. Only a few districts received adequate rains for good crop production. Both Balaka and Mangochi were affected by long dry spells during this season. As such, the teams continued to engage the households in different food security and economic strengthening activities such as wetland farming, use of modern methods of farming and Village Savings and Loans schemes. In the communities that received adequate rains, the community teams engaged the vulnerable households in heavy use of modern methods of farming such as use of compost manure in their gardens. Vulnerable families were also encouraged and taught by agriculture extension workers how they could preserve some of the locally available vegetables by using some food preservation techniques as well as cultivating crops that thrive with minimal water requirements such as cassava and sweet potatoes.

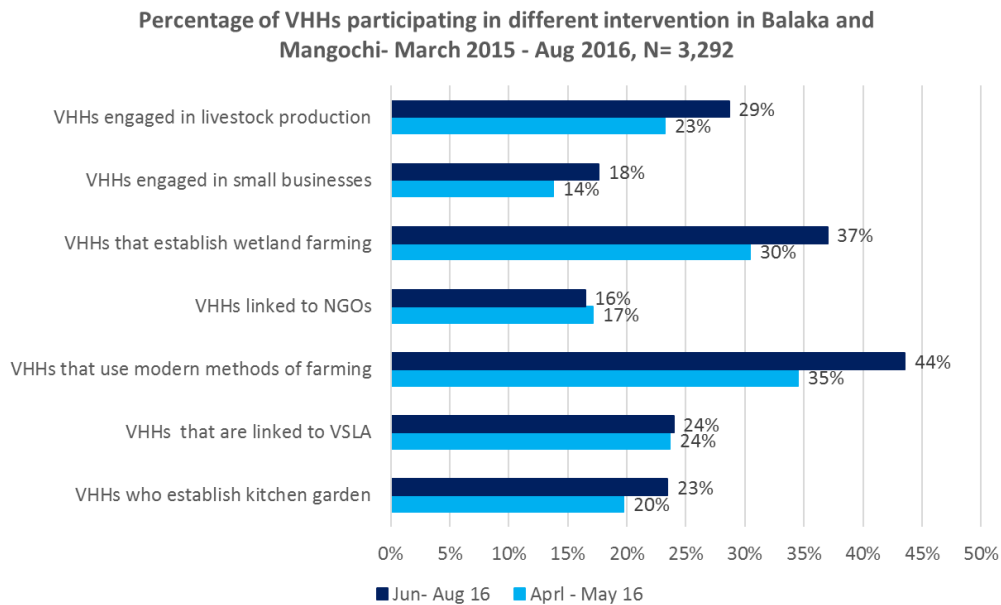
Figure 40. Malawi: Proportion of VHHs participating in various livelihood interventions in two districts (March 2015 –August 2016)



- Different categories of vulnerable families were linked to appropriate interventions based on their vulnerabilities, capacities as well as the available services in the communities. **Figure 41** shows an increase in the proportions of vulnerable households benefiting from various interventions such as use of modern methods of farming (44%) such as conservation agriculture, intercropping,

winter cropping, preparation of compost manure such as 'Mbeya' fertilizer, use of modern agricultural inputs such as early maturing crops, disease and drought resistant crops and animals. More vulnerable families participated in wetland farming during the dry season by renting small pieces of wetland farms to grow maize and vegetables for sale to promote their economic status at the household level.

Figure 41. Malawi: Proportion of vulnerable households linked to various livelihood interventions, Balaka and Mangochi Districts (July 2015 – Aug 2016)



- Use of modern methods of crop production (44%) and wetland farming (37%) were favored among interventions that vulnerable households participated in. ASSIST supported the teams to develop improvement aims on improving health linkages among VHHs to access health services in the targeted communities. The community QI teams in the last two quarters worked on improving linkages of vulnerable families into care in the nearest health facilities in their communities.
- **During the year, ASSIST encouraged the teams to spread the effective interventions to other households by increasing their targeted numbers of vulnerable households.** One example of such a community team that was supported with livelihood interventions was Mpeya CBO, which is working with 119 households. The QI team engaged these households in different livelihood activities. Currently the QI team is in the process of identifying more vulnerable households to support with livelihood interventions having learned how the first vulnerable households have benefited from some of the effective interventions.
- **Health:** In FY16, the MOGCDWS with support from ASSIST, supported the community teams to contribute towards the country's goal of reaching 90% of PLHIV to be HIV diagnosed, 90% of HIV diagnosed to be initiated on ART care, and 90% initiated on care to be retained in care. The teams were reminded that their community contacts with vulnerable families should promote and encourage HIV diagnosis, initiation in care, and retention of the HIV clients in care. Communities were encouraged to use every opportunity at the household level to sensitize vulnerable families to access and utilization the available health services in their catchment areas. Community teams integrated health services in the existing improvement work by intensifying HIV counselling, guidance, and referrals of vulnerable families to appropriate health services according to their needs. The teams were encouraged to support vulnerable families to access other health services such as TB screening, nutrition services, antenatal care, and family planning if they notice the need at the household level. The community QI teams were encouraged to work with the Health Surveillance Assistant and community health volunteers to support the known HIV positives to adhere to ART treatment to reach viral suppression. The PLHIV are also being

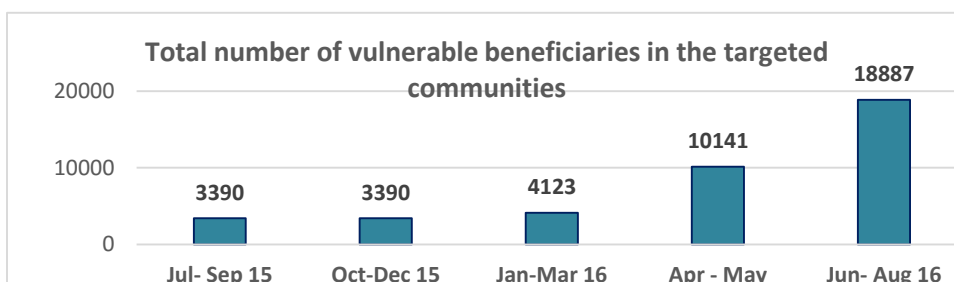
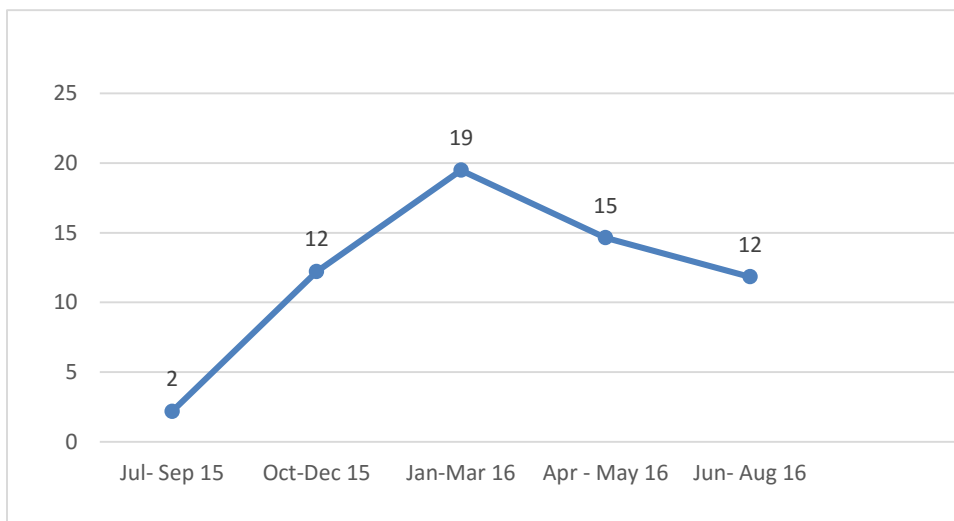
encouraged to join PLHIV support groups in their catchment area to share and participate in group therapy sessions to improve their mental psychological wellbeing as well.

- As the targeted households increased, teams continue to provide counselling guidance and facilitate referrals of vulnerable beneficiaries to different health services. **Figure 42** shows the proportion of vulnerable children and caregivers who have been tested for HIV and know their results in 10 communities.
- **The proportion of beneficiaries tested and knowing their status during the year.** The ten QI teams supported by ASSIST linked a total of 4,938 vulnerable beneficiaries for HTC and they know their status. In just the last quarter July-August 2016 a total of 2,236 (12%) vulnerable beneficiaries were linked to HTC and they know their status. It is also important to note that the QI teams increased the targeted number of vulnerable beneficiaries and hence may have also affected the proportion of beneficiaries tested. Towards the end of the quarter, ASSIST guided the teams to develop improvement aims on promoting linkages to health services among vulnerable families to contribute towards the country goal of 90-90-90 by 2020.
- **Results on linking vulnerable families to various health and HIV services in Balaka and Mangochi districts.** ASSIST-supported community teams identified 3,222 HIV positive beneficiaries and collected disaggregated data by age, sex and location. From the analysis of the data it was observed that 33% (1064) of HIV positive beneficiaries were in the 10-24 year age group (82% females and 18% males). UNAIDS estimates that nationally 60% of PLHIV 15-24 are female,⁵ meaning that community teams we are working with in Malawi are not adequately reaching males in the target group of PLHIV 10-24 years old.

⁵ http://www.unaids.org/sites/default/files/country/documents/MWI_narrative_report_2015.pdf

Figure 42. Malawi: Proportion of vulnerable children and caregivers who have been tested for HIV and know their status, 10 communities, Mangochi and Balaka Districts (July 2015 – Aug 2016)

Changes tested
 -Encouraging testing in community meetings and home visits
 -Linked with other organizations to promote HIV testing



Activity 2. Improve the quality and safety of VMMC

OVERVIEW

Malawi intends to reduce new HIV infections by 70% according to its National HIV Strategic Plan 2015-2020. To achieve this goal, the MOH has laid out and prioritized a combination of evidence-based interventions one of which is VMMC. The MOH rolled out the VMMC program in 2012 and plans to scale up the services across the country in FY16. ASSIST provides technical assistance to the MOH to continuously improve the quality and safety of VMMC among two implementing partners. In FY16 ASSIST continued to support a total of 17 sites funded by PEPFAR funding. These implementing partners are PSI and Jhpiego.

KEY ACCOMPLISHMENTS AND RESULTS

- During FY16, the MOH supported by ASSIST conducted baseline, second follow on assessments for 17 teams in PEPFAR targeted districts.** It focused on the previously assessed seven VMMC service areas: 1) Management systems; 2) supplies, equipment, and environment; 3) registration, group education, and IEC; 4) individual counseling and HIV testing; 5) male circumcision surgical procedure; 6) monitoring and evaluation; and 7) infection prevention. The team conducted VMMC baseline and second follow on assessments from 11th-22nd July 2016. The assessments were done for a period of ten days targeting all existing nine teams and eight new VMMC teams (two new PSI teams, five Malawi Defense Force [MDF] teams and one Jhpiego-supported team). The second follow-on assessments targeted nine existing teams (six PSI and three Jhpiego sites). The baseline assessment observed that the eight newly assessed sites (two PSI, one Jhpiego, and five MDF) had a mean score of 74.4%. The baseline assessment discovered that service areas that adhered to VMMC quality standards amongst the seven service areas were supplies, equipment and environment, male circumcision surgical

procedure, and infection prevention. Some gaps were identified mainly in management system and M&E which had mean scores of 57.2% and 56.2% respectively.

- **The two newly assessed sites for PSI had exceptional results with a mean score of 94.6% compared to MDF and Jhpiego’s teams, which had mean scores of 66.3% and 74.0%, respectively.** This could be because some of the team members for the new sites came from the old PSI teams hence a trickle-down effect is being observed in the newly established teams supported by PSI. It might also be that the technical officers at the implementing partner, have now built their capacity in continuous quality improvement standards for all the service areas. Generally, there were great improvements within the teams in various sites during the period of baseline, first and second follow-on assessments.
- **During the second follow-on assessment of the nine existing teams, it was observed that the teams had tremendously improved in their adherence to quality standards particularly in infection prevention; supplies, equipment, environment; and male circumcision surgical procedure with mean scores of 97.8%, 98.1% and 94.9% respectively.** Service areas that still need improvement include management systems; M&E; individual counseling, HIV testing for male circumcision clients, group education and IEC which had mean scores of 89.9%, 93.4%, 84.4%, and 87%, respectively (see **Figure 43**).
- **Improvements were also observed across the seven service areas such as in supplies (98.1%) infection prevention (97.8%), male circumcision procedure (94.9%) and M&E (93.4%).** Areas that did well but still have room for improvement are HTC and IEC materials for male circumcision.

Figure 43. Malawi: Dashboard of baseline, follow-on and second follow-on assessment in 20 PSI, Jhpiego, and DOD supported mobile and static VMMC sites (May-June, Oct 2015, and Aug 2016)

#NAME?	Site	Baseline Assessment (May & June 2015)										Follow-on assessment (2 nd October 2015)										Follow-on assessment (3rd July to August)									
		Management systems	Supplies, equipment & environment	Registration, group education & IEC	Individual counseling & HIV testing	Male Circumcision surgical procedure	Monitoring & Evaluation	Infection prevention	Management systems	Supplies, equipment & environment	Registration, group education & IEC	Individual counseling & HIV testing	Male Circumcision surgical procedure	Monitoring & Evaluation	Infection prevention	Management systems	Supplies, equipment & environment	Registration, group education & IEC	Individual counseling & HIV testing	Male Circumcision surgical procedure	Monitoring & Evaluation	Infection prevention									
1	Bangwe- Khola -Joseph	54.5	33.3	100	66.7	40	64.3	60	54.5	83.3	100	83.3	93.3	71.4	66.7	90.9	100	100	83.3	83.3	76.6	100									
2	Naliwera-Mankwala-Jelic-Doveko	63.6	83.3	66.7	72.2	71.9	71.4	88.9	72.7	100	100	23.6	84.8	71.4	90	81.8	100	100	94.4	100	100	100									
3	Sakata-Mauwa-Martha	90.9	66.7	83.3	72.2	75.8	21.4	87.5	81.8	100	66.6	72.2	90	78.6	80	100	100	83.3	88.9	93.3	100	100									
4	Chimwala-Lungwena-Mankwala-Doveko	54.5	83.3	83.3	61.1	90.6	28.6	77.8	72.7	100	100	100	96.6	71.4	80	90.9	83.3	83.3	50	93.3	78.3	100									
5	Dziwe-Katema CBO-Mphavu-Makata	63.6	83.3	66.7	88.9	78.8	85.7	66.7	90.9	100	83.3	66.6	90.9	92.8	100	100	100	83.3	66.7	100	100	90									
6	Malawi, Lundu-chitwenje	45.5	33.3	66.7	72.2	74.2	71.4	70	81.8	100	83.3	66.6	100	82.8	90	72.7	100	83.3	94.4	100	92.9	100									
Baseline Assessment For PSI (August 2016)																															
7	Team Chisomo(Namcholi)	72.7	100	100	88.9	100	100	100																							
8	Eliza, Manyowe	90.9	100	83.3	100	96.6	92.8	100																							
Baseline Assessment Jhpiego (May & June 2015)																															
Follow-on assessment (2nd February 2016)																															
Follow-on assessment (3rd August 2016)																															
9	Zomba police-Chipini	27.3	33.3	28	0	66.7	50	54.5	45.5	83.3	66.7	66.7	72.7	26.6	80	100	100	66.7	88.9	90.9	92.9	90									
10	Thyolo	36.4	50	50	NO	50	78.6	83.3	54.4	83.3	50	40	70	33.3	66.7	81.1	100	100	100	100	100	100									
11	Makhira st Montfort	45.5	33.3	0	50	33.3	0	60	27.3	83.3	50	50	84.8	35.7	80	90.9	100	83.3	93.3	93.3	100	100									
12	migowi	36.4	50	100	88.9	56.7	21.4	100																							
13	Chrisitu	27.3	33.3	50	17.6	28.1	78.6	54.5																							
14	Malambwe	18.2	83.3	50	66.7	50	28.6	77.8																							
15	Thembe	18.2	66.7	80.7	66.7	42.9	71.4	77.8																							
Baseline Assessment For DOD (August 2016)																															
16	Kamuzu Barracks	36.5	66.7	60	41.7	80	7.1	40																							
17	Moyale Barracks	81.8	83.3	66.7	66.7	90.9	85.7	77.8																							
18	Malco	27.3	100	50	83	100	57.1	80																							
19	Cobbe Barracks	27.3	83.3	100	72.2	90	35.7	90																							
20	Navy Marine	54.5	66.7	66.7	83.3	90	21.4	50																							
	Bwaila Hospita	66.7	66.7	100	91.7	54.5	50	88.9																							

Key >80% 50%-<80% <50% Not Observed Not assessed(1)

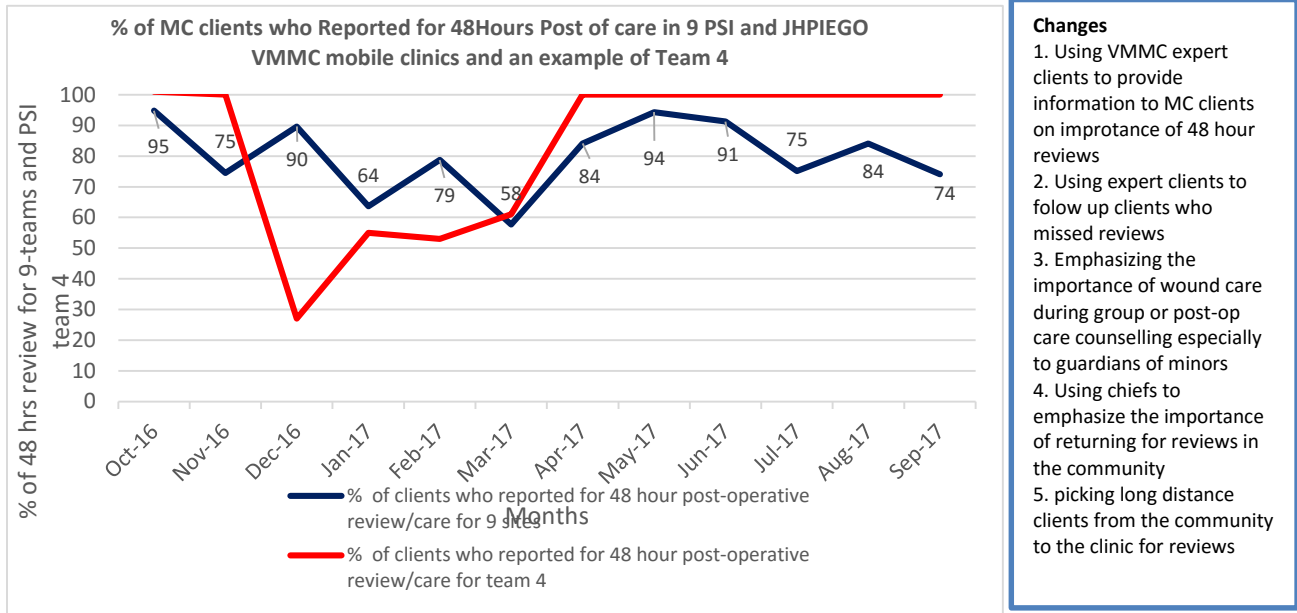
- **Conducted QI field coaching visits in 6 VMMC mobile teams** (November 16-19 2015 and May 9-13, 2016). The MOH with support from ASSIST conducted on-site field coaching sessions with the six teams. The coaching targeted all members of the QI team per site (team leader, clinician,

nurses, infection prevention officer, and the HTC counsellor). The areas covered during the first coaching sessions included how to develop the improvement plans, the process of identifying areas for improvement and on the ongoing process of applying the PDSA cycles in testing changes at a time was also emphasized. The teams were given assignments to identify the areas of improvement and to develop the improvement plans by December in preparation for the Learning Session. Teams developed improvement aims on improving post-operative reviews at 7 days, which was observed as a gap among all teams. In Q3, the MOH HIV and AIDS Department with support from ASSIST conducted visits to the 9 VMMC USAID supported QI teams under PSI (6 sites) and Jhpiego (3 sites). The visits aimed at supporting teams to comprehensively use quality improvement processes in VMMC service delivery. This support guided the teams on how to have vibrant and functional teams, developing and working through the improvement plans to achieve desired quality VMMC services being delivered in the targeted districts. The teams were also taught how to effectively use data being generated by the teams to make informed decisions to improve VMMC programming and service delivery.

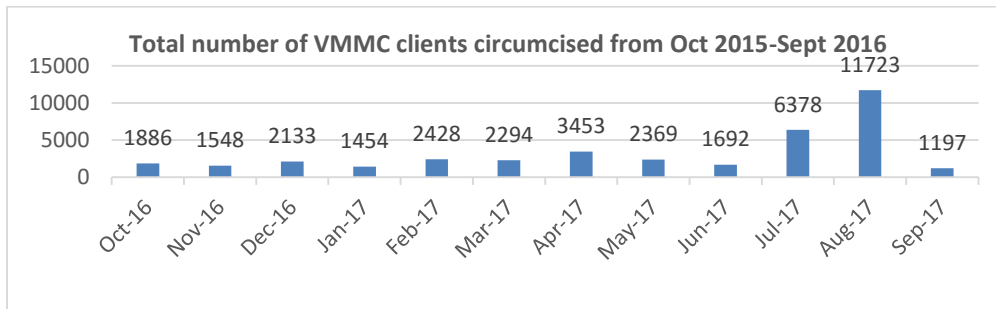
- **Conducted first and second learning sessions for VMMC QI teams** (Dec 21-22, 2015 and June 27-28, 2016). During the first session, five representatives from each of the six QI teams were brought together to share lessons from their improvement experiences. Teams went through practical steps to develop improvement plans based on their identified gaps. The teams also agreed on a number of improvement indicators, which they would be tracking in their specific sites. Most teams identified the low turn-up for day 7 post-op review as the main challenge. In Q3, the MOH with support from ASSIST conducted a quarterly learning session for the 9 VMMC QI teams under PSI and Jhpiego. This learning session was conducted to help the teams accomplish the following:
 - Review the follow-on assessment gaps and action plans and update the current status of the gaps
 - Develop new action plans outlining how the teams have addressed the gaps in quality VMMC services
 - Share progress on trends on HIV referrals, adverse events, circumcisions' done across the age groups, 48 hours and 7 days' post-op follow up trends across all the teams.
 - Share lessons and results on their improvement plans, and also to discuss issues identified during the coaching visits such as understanding of denominators used to calculate proportions on improvement indicators. By the end of the meeting, the teams refined their improvement plans and developed action plans outlining how they planned to address the quality gaps identified during the previous CQI assessments. For sites that had already reached 100% they were taught how to maintain the achievements reached.
- **Development and adoption of the VMMC data collection tool** (Q2). The MOH supported by ASSIST developed a standardized VMMC data collection tool to collect baseline data across various partners. ASSIST drafted the tool with indicators and presented it to the VMMC TWG for review and input among various IPs. The implementing partners provided feedback and adopted it for the use by the VMMC teams. On March 9, 2016 the TWG reviewed and adopted the tool.
- **During Q3, the MOH supported by ASSIST followed up QI teams supported by PEPFAR supported partners to start using the data collection tool on VMMC that was agreed at the National Technical Working Group** (Q3). Using the VMMC data that was submitted throughout the year ASSIST supported the implementing partners to do some analysis of trends such as VMMC clients referred for further HIV and STI services and proportion of VMMC clients that returned for 48-hour post-operation care and seven days post-operation care. The teams also submitted their data regarding adverse events observed and reported as per the national guidelines. The teams used CQI approaches such as analysing why they were having cases of AEs using fishbone diagrams to ensure that occurrence of AEs were minimized. Severe adverse events were rarely experienced and the proportions for moderate adverse events were below the WHO allowable standard for moderate adverse events.
- The nine teams also worked on improving 48-hour post-op follow ups of VMMC clients during the third quarter. Some teams worked on improving the proportion of VMMC clients who came back for post op care at the VMMC facility. **Figure 44** shows results of a team that had challenges with

48 hours' post-op care for VMMC clients as seen in December (27%) and the team tested a number of changes to improve this proportion to now 100% in April 2016.

Figure 44. Malawi: Proportion of circumcised clients who return for their 48-hour post operation review; results from 9 teams and an example from Team 4, Mangochi District (Oct 2015 – April 2016)

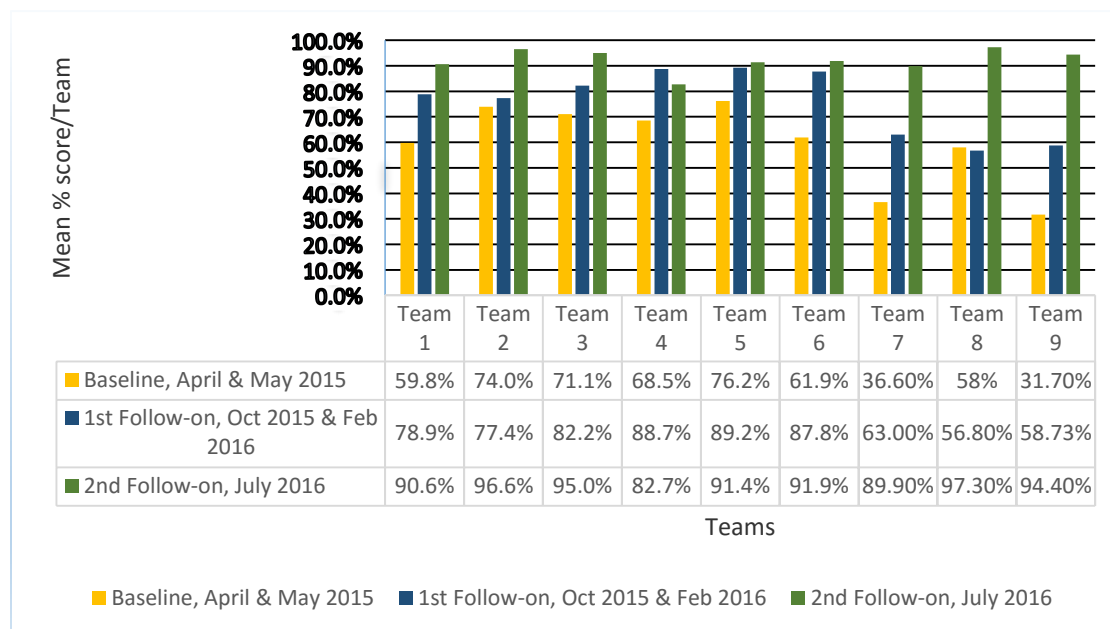


- Changes**
1. Using VMMC expert clients to provide information to MC clients on importance of 48 hour reviews
 2. Using expert clients to follow up clients who missed reviews
 3. Emphasizing the importance of wound care during group or post-op care counselling especially to guardians of minors
 4. Using chiefs to emphasize the importance of returning for reviews in the community
 5. picking long distance clients from the community to the clinic for reviews



- **Based on the findings of the baseline and follow-on assessments conducted by the MOH with technical assistance from ASSIST, it is apparent that before the introduction of continuous QI in VMMC service delivery there were frequent quality improvement gaps as observed in some of the MDF newly assessed sites.** However, the use of the continuous QI approach has been shown to help the teams to work through some of the challenges they encounter in VMMC service delivery. The mean score for baseline, first follow-on, and second follow-on assessment are compared in **Figure 45**. The findings demonstrated that the mean score of a team during the three assessments progressively improved with every assessment except team four and team eight which had different trends in improvement across the three assessments. The improvements observed would therefore be associated with the improvement activities undertaken by these teams.

Figure 45. Malawi: Mean scores of nine VMMC teams across baseline, first follow-on, and second follow-on assessments (April 2015 – July 2016)



- Conducted QI coaching of five Jhpiego-supported MDF teams (Sept 11-21, 2016).** The MOH-HIV and AIDS Department, Jhpiego, MDF Senior Officer and ASSIST conducted joint QI coaching field visits to five MDF VMMC static sites. The main aims for the coaching were to help the MDF sites integrate continuous QI in VMMC service delivery. The specific objectives of the QI field visits included the following:

 - Review the baseline assessment findings with the team, identify quality gaps, generate the action plans and update the current status of the gaps;
 - Develop new action plans outlining how the teams have addressed the gaps in quality VMMC services;
 - Monthly QI VMMC services data collection.
- This support guided the QI teams on how to have vibrant and functional teams, developing and working through the improvement plans to achieve desired quality VMMC services being delivered. The teams were also being equipped on how to effectively use data being generated by the teams to make decisions to improve VMMC service delivery.

Results:

- After the baseline assessments the teams were requested to review their data and identify areas that needed specific improvement objectives to be developed.** Moyale Barracks, as one of the supported MDF VMMC teams, selected to work on improving 48-hour post-operation follow up visits of VMMC clients. The team started to test changes and collecting data on the percentage of clients that were circumcised and came back for 48hour post post-op follow up visits. The Moyale barracks team had no documentation of 48 hours’ post-op care for VMMC clients as seen in the months before April 2016. After being trained the team started collecting VMMC quality indicators data and tracking the number of clients that actually came back for post-op care. Some of the changes the teams tested was identifying a van for the army to go in selected communities to pick clients that were due for 48-hour post op reviews. They also emphasized the importance of coming for the 48 hour reviews. With these changes the team noticed an improvement from 0-61% and then in this quarter in August 2016 it has reached 95% of eligible VMMC clients that were supposed to come for 48 hour reviews came for the review visits in August 2016. The Moyale team was also taught how important it is for the team to encourage circumcisions among the 15-29 years old men as compared to the other age categories in terms of HIV prevention.

IMPROVEMENT IN KEY INDICATORS

Activity	Indicators	Baseline: Education: Oct 2013 HES: Jan 2015	March 2016	May 2016	August 2016
Improve the quality of services for vulnerable children in Malawi	% of vulnerable children 6-17 years passing termly exams	54% (5822) - 15 schools	60% (9779) - 20 schools	60% (9779) - 20 schools	70% (9779) - 18 schools
	% of vulnerable children who are enrolled in school	TBC	TBC	1565 (10 schools)	1290 (6 schools)
	% of vulnerable children and care givers that are referred to at least one health service	16% (547)	43% (1771)	19% (1923)	16% (2934)
	% of vulnerable children and care givers linked to HIV services and treatment by community volunteers	8% (265)	24% (972)	12% (1186)	10% (1915)
	% of vulnerable children and caregivers tested for HIV and know their status	2% (74)	19% (803)	15% (1485)	12% (2236)
	Indicators	Baseline: VMMC October 2015	March 2016	April 2016	July – Aug 2016
	% of MC clients who consented for MC	100% (1995) 6 sites	102% (4107) 9 sites	104% (2963) 5 sites	115% (23,600) 9 sites
	% of MC clients who had MC done	100% (1989) 6 sites	98% (4023) 9 sites	96% 5 sites	79% (20,505) 9 sites
	% of MC clients who experienced moderate adverse events	0% 6 sites	0.2% (10) 9 sites	0.1% (4) 5 sites	0.03% (7) 9 sites
	% of MC clients who experienced severe adverse events	0% 6 sites	0% 9 sites	0% (0) 5 sites	0% (0) 9 sites
Improve the quality and safety of VMMC services in Malawi	% of MC clients who reported for 48hrs post-op care	95% (1886) 6 sites	63% (2547) 9 sites	77% (2209) 5 sites	80% (16,313) 9 sites
	% of MC clients who reported for the day 7 post-op care	65% (224), Nov 15, 3 sites	91% (604) 3 sites	TBC	50% (10,152) 9 sites
	% of MC - HIV+ clients referred for ART care	0.3% (5) 6 sites	0.6% (24)	0.6% (18) 5 sites	0.2% (34) 9 sites
	% of MC clients referred/ treated for STI infection	0%	0.3% (11)	0.1% (4) 5 sites	0.4% (90) 9 sites

GENDER INTEGRATION

During the two learning sessions, QI field coaching visits and QI trainings the facilitators talked about the importance of disaggregating data in OVC and VMMC services to ensure females are reached with quality interventions. Mobile VMMC teams were encouraged to disaggregate data by sex to ensure women support their children and spouses in VMMC for quality outcomes of VMMC services.

In the OVC work, community teams were also encouraged on disaggregating data in health as well as economic strengthening activities to ensure there were no gender gaps and differences among boys and girls, men and women in terms of access and utilization of services in the catchment area. Communities are now able to use this data to ensure all sexes are accessing these crucial services. Each team has been provided with age as well as sex disaggregated indicators to track selected indicators among vulnerable populations. The teams also noticed that male involvement in access of health services as well as the participation of men in economic and food security interventions at the household level is low. Teams were encouraged to use some men as role models to encourage other men in communities to access health services as well participate in interventions to improve economic wellbeing and improve food security at the household level.

Sex-disaggregated data continue to be collected in OVC activities, monitoring health and economic strengthening activities to ensure there are no gender gaps and differences among boys and girls, men and women in terms of access and utilization of services in the catchment area.

Gender content has been integrated into QI trainings in OVC and VMMC activities. A gender indicator was incorporated in the MOH VMMC data collection form and implementing partners will start tracking the participation of women/spouses in VMMC services.

ASSIST Malawi continues to disaggregate OVC health, education, and livelihood data by sex, location and age whenever possible, to identify and address gender- and age-related gaps.

In Balaka and Mangochi, teams were also encouraged to track girls and women's participation in education, economic strengthening and health activities to ensure all ages of women benefit from the improvement work which the teams are working on.

SUSTAINABILITY AND INSTITUTIONALIZATION

ASSIST's sustainability strategy in Malawi relies on the following principles: 1) Enhancing the capacity of MOGCDWS and MOH at both the national, district, zonal and community level to facilitate subsequent continuous quality improvement work in various service areas. During FY16, ASSIST has in all its activities such as QI coaching field visits, learning sessions, assessments, trainings and data assessments and validation processes let the MOGCDWS lead the improvement activities to build their capacity to facilitate further improvement in other districts. The use of the QI approach promoted coordination, cost efficiency and sustainability of quality social and health services at all levels; 2) creating a conducive environment at health and social care level where care providers are able to identify their own priorities and seek necessary support from various stakeholders providing services; The ten teams have shown the ability of assessing their own needs and identifying other stakeholders to support vulnerable families in their catchment areas and 3) facilitating further institutionalization of results, service providers will focus their efforts on developing processes to align providers and decision makers at all levels in existing government structures such as District Implementation Plan Committees, District Executive Committees, Area Development Committees, Village Development Committees, and traditional leadership. During the year the ten teams at community and district levels have facilitated discussions with all the relevant stakeholders in the catchment areas to institutionalise the improvement work at all the relevant levels particularly at community levels. All the efforts have contributed towards strengthening the social welfare systems at the community, district and national levels because the improvement work done in the ten communities empowers all the relevant stakeholders to take leadership in facilitating improvement at community, district, and national levels.

ASSIST supported the MOH at various levels to build the capacity of VMMC service providers in continuous quality improvement methodologies to sustain the quality and safety of VMMC services. It is anticipated that once site teams mature in implementing improvement work at the sites they would continually explore areas that need quality improvement within the service area and other service areas that are applicable. Working with MOH at both national, zonal, district, facility and community level will ensure that service providers have competencies at all levels to facilitate continuous quality

improvement efforts thereby maintaining and sustaining quality VMMC services being provided to Malawians with the established health care structure.

MALI

BACKGROUND

During the last several years, the Government of Mali and its partners have made serious investments in the health care sector and have developed multiple integrated strategies to improve the access, demand, and quality of maternal, newborn and child health (MNCH), family planning (FP) and nutrition services at both facility and community levels. Despite these efforts, the country has not yet seen an improvement in key health indicators. The maternal mortality rate (MMR) remains at 368 per 100,000 live births. The causes of maternal death are postpartum hemorrhage, hypertensive disorders, sepsis, unsafe abortion, and prolonged or obstructed labor. The neonatal mortality rate is 34 per 1000 due to preterm births, asphyxia and sepsis and the child mortality rate is 95 per 1000 (DHS 2012-2013). Skilled birth attendance is reported only at 59% of births, however could significantly reduce maternal mortality due to hemorrhage. Antenatal care visits are reported at 41% overall, and only 2% for four visits (DHS 2012-2013).

Mali has a high total fertility rate of 6.1 and a low contraceptive prevalence rate of 10% for modern methods. The unmet need for FP in Mali is 26% among all women of reproductive age (DHS 2012-2013). While postpartum family planning (PPFP) with healthy timing and spacing of pregnancies, lactational amenorrhea, and transition to modern FP methods are included in Mali's policies, norms, and protocols, there still is the need to emphasize the role of longer-acting FP methods in assisting women to achieve appropriate pregnancy spacing.

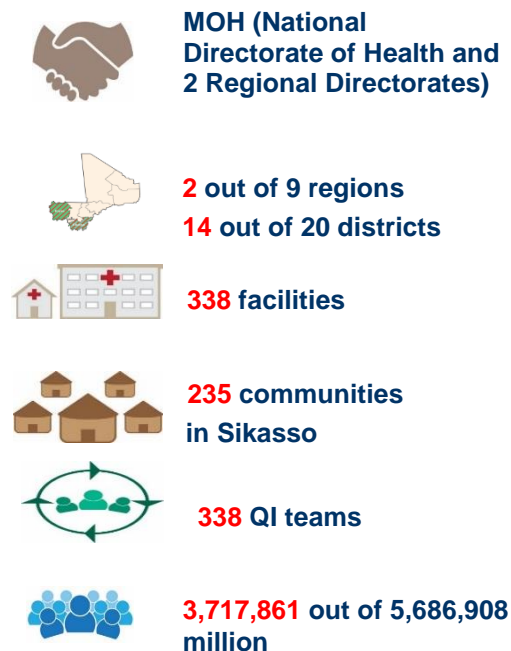
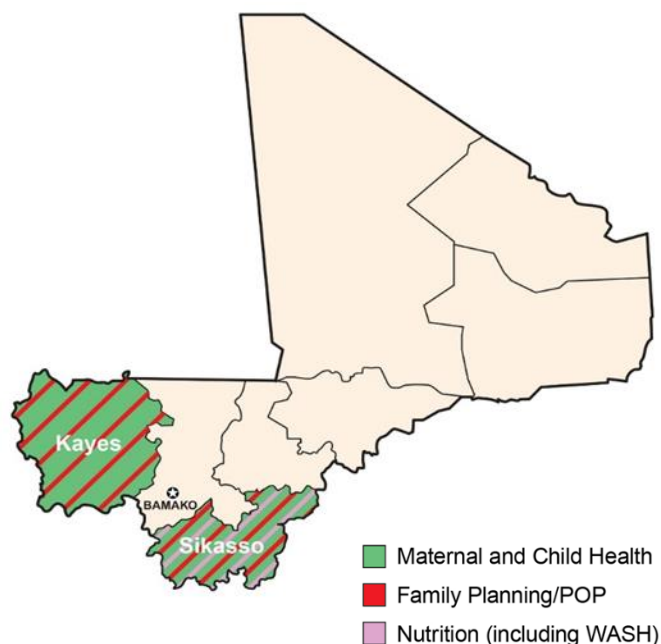
In Mali, USAID ASSIST is contributing to the reduction of maternal, newborn, and child mortality by working to improve health care and essential functions of the health system at facility and community levels. To achieve these goals, the project is continuing to work with the government and USAID implementing partners (IPs) to strengthen high-impact evidence-based MNCH/FP and nutrition/WASH intervention packages at the community and facility levels. ASSIST is working hand-in-hand with regional and national Ministry of Health (MOH) representatives to reinforce and expand ongoing efforts to achieve country maternal newborn and child health targets.

Since 2013, ASSIST has successfully worked in 244 community health centers and referral health centers in Kayes and Sikasso regions to improve the provision of MNCH/FP and nutrition services by applying the quality improvement (QI) approach. More than 7,000 skilled providers and 8,000 community health workers have been involved in capacity and competency building at different levels of the health care system.

In FY16, ASSIST has scaled up the WHO Safe Childbirth Checklist (SCC) including best practices for Active Management of the Third Stage of Labor (AMTSL), Essential Newborn Care (ENC), pre-eclampsia and eclampsia (PE/E), Helping Babies Breathe (HBB), postpartum family planning (PPFP) and antenatal care (ANC) to all 10 districts in the Kayes Region and four districts of the Sikasso Region covering 338 out of 338 facilities in the two regions. Anemia prevention and control work has been scaled up in the 10 districts of Kayes and three new districts of Sikasso with a coverage of 338 facilities in total.

In FY17, USAID Mali requested that key technical contents be scaled up from 14 districts to 38 districts covering a total of 791 facilities in five regions. Knowledge gathered from FY16 implementation and results will be packaged and used in new regions to reduce maternal newborn and child deaths. Coaches from the MOH will conduct training, capacity building, follow up, data collection and data validation at all level to sustain project approach and results. Scale-up strategies will be shared and implemented using project resources and funds from other partners working on QI.

Scale of USAID ASSIST's Work in Mali



PROGRAM OVERVIEW

What are we trying to accomplish?	At what scale?
1. Improve delivery of high-impact evidence based maternal and newborn care and postpartum family planning services at facility and community levels	
<ul style="list-style-type: none"> Improve delivery of high-impact evidence based maternal and newborn care and post-partum family planning services at facility and community levels Build capacity of district, regional, and national managers and stakeholders to support quality improvement processes 	<ul style="list-style-type: none"> Regions: 2 out of 9 (Kayes and Sikasso) Districts: 14 out of 20 Facilities: 338 (233 out of 233 in Kayes and 109 out of 229 in Sikasso) Catchment population: 2,444,907 in Kayes and 1,272,954 in Sikasso
2. Improve delivery of evidence based interventions to reduce anemia among pregnant women and infants at facility and community levels	
<ul style="list-style-type: none"> Improve delivery of evidence-based interventions to reduce anemia among pregnant and postpartum women and infants at facility and community levels Build capacity of district, regional, and national managers and stakeholders to support quality improvement processes 	<ul style="list-style-type: none"> Regions: 1 out of 9 (Sikasso) Districts: 4 out of 10 Facilities: 100% (109 out of 109) Peripheral facilities: 105 out of 105 District hospitals: 4 Catchment population: 1,272,954

Improvement Activity

Activity 1. Improve delivery of high-impact evidence based maternal and newborn care and postpartum family planning services at facility and community levels

OVERVIEW

The project is focusing on evidence-based MNCH/FP high-impact, cost-effective best practices including but not limited to: AMTSL, ENC, HBB, and PE/E early detection and management interventions. These interventions are integrated into the WHO SCC and scaled up from nine districts and 266 community health centers (CSCOMs) to 14 districts/338 CSCOMs in two regions. Separately

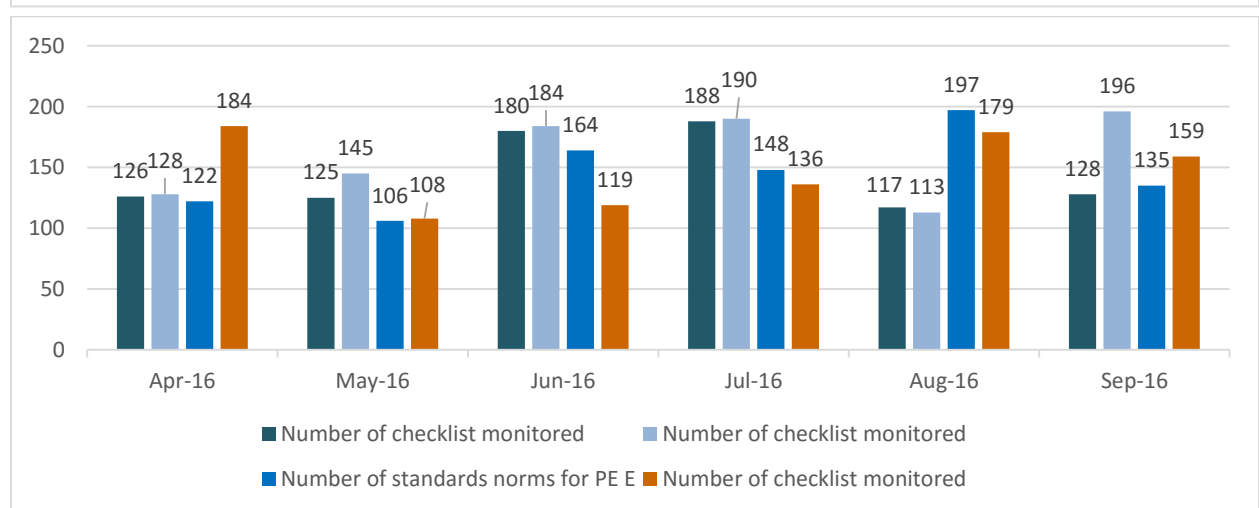
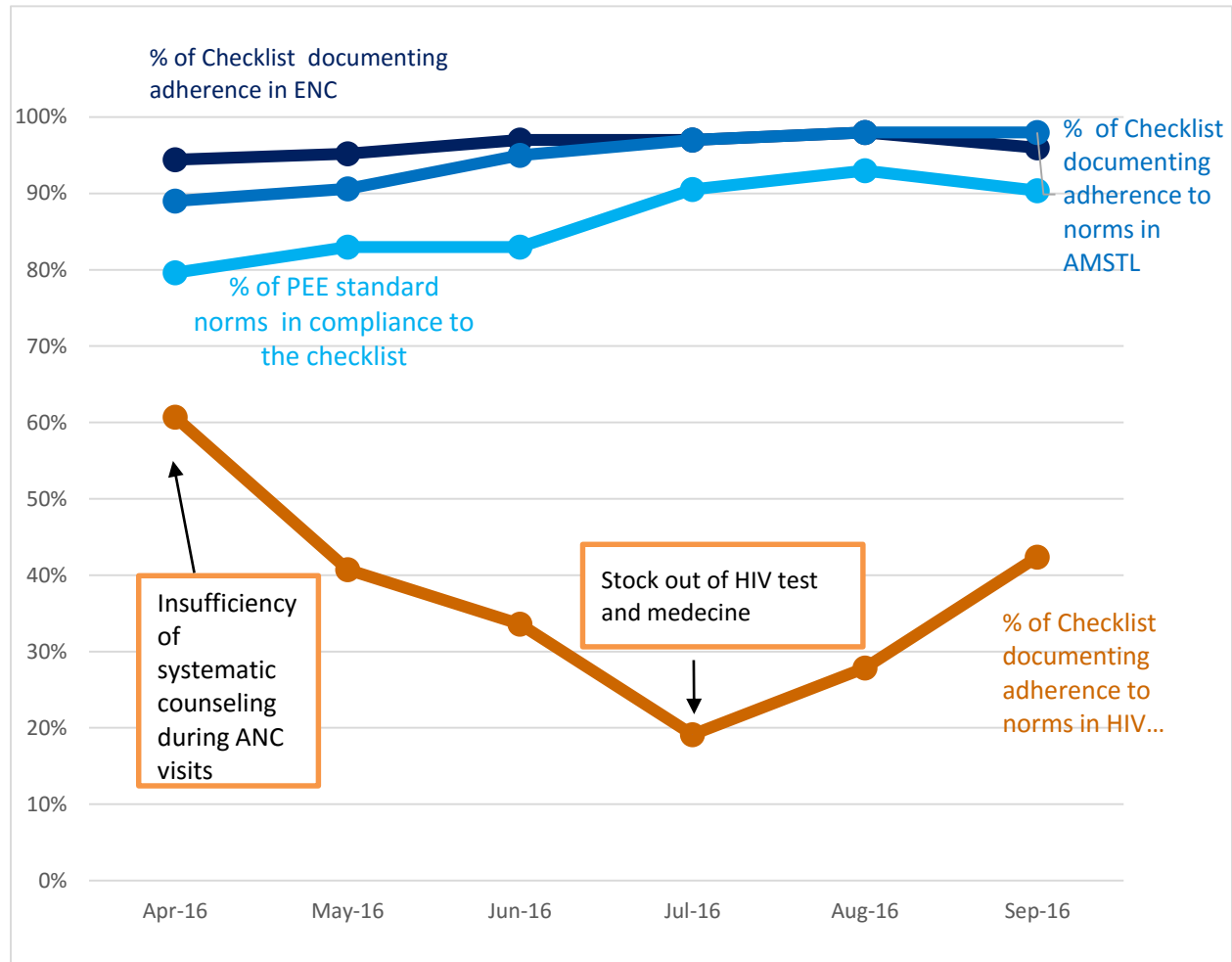
from the integrated package through the Safe Birth Checklist, the project is applying QI to PPF in all 10 districts of Kayes and is scaling up to four districts of Sikasso Region where anemia improvement work has been scaled up from one to four districts.

KEY ACCOMPLISHMENTS AND RESULTS

- **Provided technical support to strengthen and scale up ANC and PPF best practices and spread package in 233 facilities in 10 districts of Kayes and 109 facilities in 4 districts of Sikasso (Oct 2015- Sept 2016).**
 - ASSIST has worked to demonstrate quality improvement applied to MNCH FP in all 10 districts of Kayes Region and four districts of Sikasso Region by conducting training sessions. As a result, the project was able to influence national technical norms and standards related to post-partum family planning and WHO Safe Childbirth Checklist including HBB, PE/E, AMTSL, and essential newborn care. Two dissemination meetings for PPF and WHO Safe Childbirth Checklist results were organized at the regional level to ensure national uptake of this process for service delivery at the health center level. Recommendations from these meetings state the scale up of these activities at the national level to cover more districts and regions. As of today quality improvement is included in the national department of health priorities to help decrease maternal and child mortalities.
 - In FY16, the project trained more than 7,000 health providers and 15,000 community members to facilitate the implementation of QI applied to MNCH FP in the impact regions. Forty regional coaches, 110 district coaches are now available to continue with capacity building and scale up of QI in other regions of the country. In addition, more than 100 health decision makers were oriented and informed about the process of quality improvement and are helping advocate and scale up the project's activities. Moreover, the project has oriented other USAID funded project teams on ASSIST approaches, tools and training materials. The staff of these projects have been exposed to the quality improvement process and implementation in the field.
- **Conducted coaching visits (April-Sept 2016)**
 - Throughout this year, coaching visits on the WHO Safe Childbirth Checklist, improved antenatal care, and PPF were conducted in Kayes. Similarly, in Sikasso, coaching visits on PPF, antenatal care and pre-eclampsia and eclampsia were also conducted.
 - SafeBirth Checklist: Four coaching visits on safe birth checklist were conducted in 97 sites in five districts of Kayes (Kayes, Diéma, Oussoubidiangna, Yelimane and Nioro) with 22 districts and regional coaches. 182 providers were assessed (116 women, 66 men) and 95% were found to comply to the use and implementation of the checklist. Within the sites where mother and child transmission services are provided, it was found that there was a stock out of HIV test and medicines during this reporting period. The use of the SCC has therefore increased the issue of availability of HIV prevention and treatment services per site.

Figure 46 illustrates the trends of services provided during delivery at maternities in the two demonstration districts of Kita and Kenieba in 47 sites.

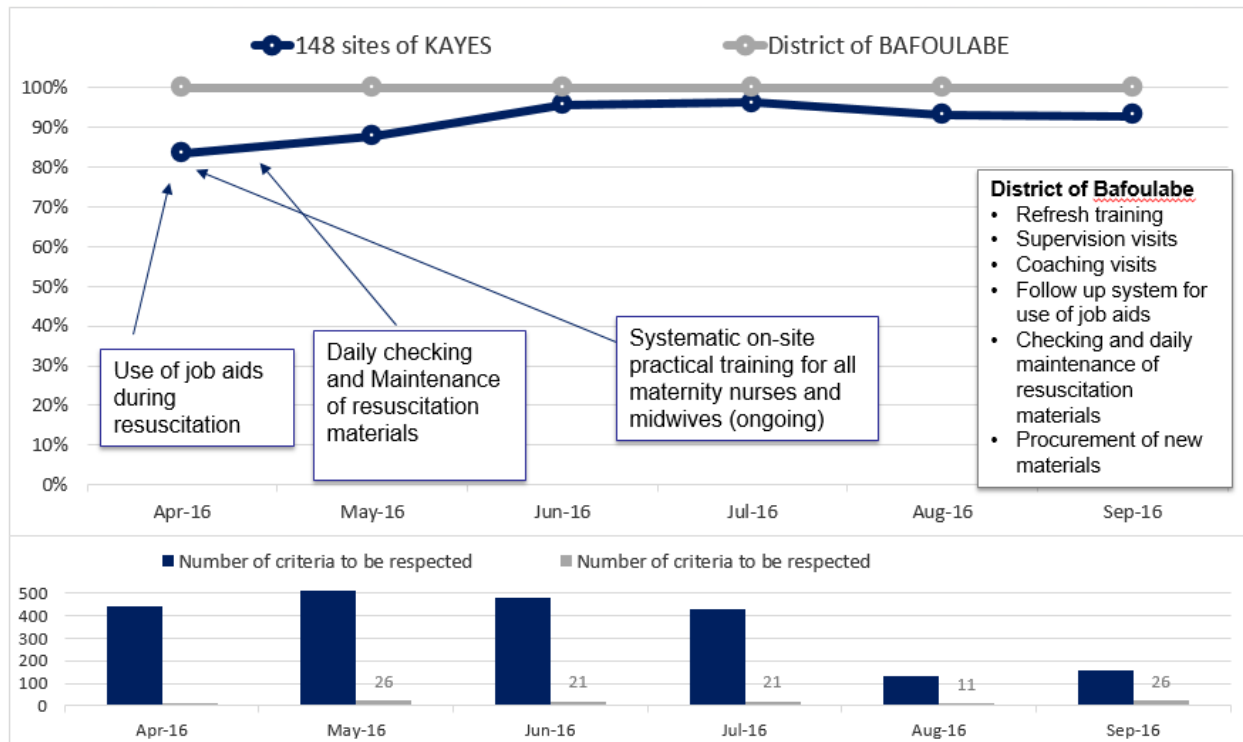
Figure 46. Mali: Percentage of Safe ChildBirth checklist use by health providers according to standard norms and compliance to norms and standards for PE/E, 47 sites, 2 districts, Kayes Region (Apr-Sep 2016)



- Increased compliance to the norms and standards for HBB in Kayes Region (Q3-Q4).** Figure 47 shows the percentage of compliance to norms for newborn resuscitation in 148 sites in Kayes Region. The district of Bafoulabe is used as a model to illustrate how well it is performing.

Bafoulabe is one of the largest districts in Kayes and access to the community health center is challenging during the raining season. However, the district team is very dynamic, takes a lot of initiative for capacity building, the center's functionality and staff recognition. They have initiated refresher trainings for their staff working at the maternity, especially nurses and midwives who are in charge of delivery at the referral health center and matrons who are at community health center level. They also intensified formative supervision visits in addition to project coaching visits. The six coaches of Bafoulabe are all trainers on HBB and they have put in place a follow-up system for the use of job aids during resuscitation, checking and daily maintenance of resuscitation materials and procurement of new complementary materials for the center through the Health Management Association.

Figure 47. Mali: Percentage of adherence compliance to norms for newborn resuscitation, 148 sites, Kayes Region (Apr-Sep 2016)



- Authorization at regional level in Kayes for the use of MgSO4 by trained providers to facilitate the transfer of women with pre-eclampsia at upper level of references for care (Q1-Q4).** One of the major causes of maternal death in the Kayes Region is linked to PE/E and the project prioritized to improve this situation through QI methods. During FY16, the project invested in training skilled and non-skilled providers to increase the screening for and case management of PE/E in all sites of the ten districts of Kayes. Regular monthly and quarterly coaching visits were organized by QI teams and health managers to support the implementation of activities at each level. As a result, 95% of providers complied with the norms and standards for PE/E screening and management.
 - The project found that both non-skilled providers and/or trained providers were not allowed to provide the first dose of MgSO4 to the women before she transferred to the upper level of reference (CSREF). The project tested and demonstrated that trained and coached providers can easily prepare the women for transfer by providing the first dose of MgSO4. MgSO4 is available in the delivery room as well as within the Caesarian-section kits in all sites of the region. As this process was not included in the National Reproductive Health Norms and Standards, the project advocated regional health managers and authorities to obtain an official letter allowing trained providers to proceed with this procedure in order to help reduce maternal mortality due to PE/E. To facilitate the implementation of this

recommendation, the project has worked with USAID SIAPS to ensure the availability of MgSO4 in the health centers through its inclusion into the National Essential Drugs list by the MoH Drugs Management Department.

- **Conducted harvest meetings** (Aug - Sept 2016). Two harvest meetings were organized in Kenieba and Kita for the Safe Childbirth Checklist best practices. In Kenieba, 11 coaches and 27 providers participated and shared the results of best practices tested in the sites. In Kita, five supervisors and 27 providers participated in the meeting. As a result, a list of best practices on quality environment, care procedures, commodities management, community mobilization, additional staffing were validated. The reports from these harvest meetings will be disseminated and practices implemented in the extension sites of new regions.
- **Contributed to national FP campaign in 20 districts of Kayes and Sikasso** (April–Sept 2016). ASSIST worked with the regional health team and the partners to complete data, validate data, and disseminate the results with all key stakeholders involved in campaign activities. At the national level, the project as part of the monitoring and evaluation working group for the campaign, compiled data for the eight regions, as well as reviewed the campaign evaluation protocol and tools. With ASSIST's support and led by the regional health teams, regional dissemination workshops were organized in Kayes and Sikasso.
- **Development of national strategy for quality improvement of services provision and care** (Q4). To respond to sustainability and institutionalization issues regarding quality improvement applied to MNCH and FP, the project initiated the development of the National Strategy for Quality Improvement with the National Directorate of Health, as well as other projects and partners working on quality improvement for health. For this process, a national working group for quality improvement was set up, which is composed of 27 representatives of each technical division involved in working on quality improvement. The committee has developed, with the technical assistance of the project team, the terms of reference for the national process to develop the national strategy. As of the reporting period, this strategy has been validated by all partners working on quality in the country, and the workshop is set for early FY17.

Activity 2. Improve delivery of evidence based interventions to reduce anemia among pregnant women and infants at facility and community levels

OVERVIEW

With the increase of anemia awareness among community partners (i.e., CSCom staff, community health associations/ASACO, local leaders, other community groups such as women's groups, etc.), ASSIST is building on the results of previous efforts to scale up and spread best practices to the other 38 health areas of Bougouni and three new districts of Sikasso (Kadiolo, Yanfolila and Kolondieba). At the facility level, ASSIST is focusing its technical support to the MOH and partners to improve screening and case management of anemia among children six to 59 months of age and pregnant women; increase the number of children six to 59 months of age and pregnant women who receive services and information on anemia prevention; and increase the number of children six to 59 months of age and pregnant women who know and adopt adequate attitudes on anemia prevention.

Collaboration with partners implementing WASH interventions is being promoted and cultivated to address parasitic causes of anemia in women and children.

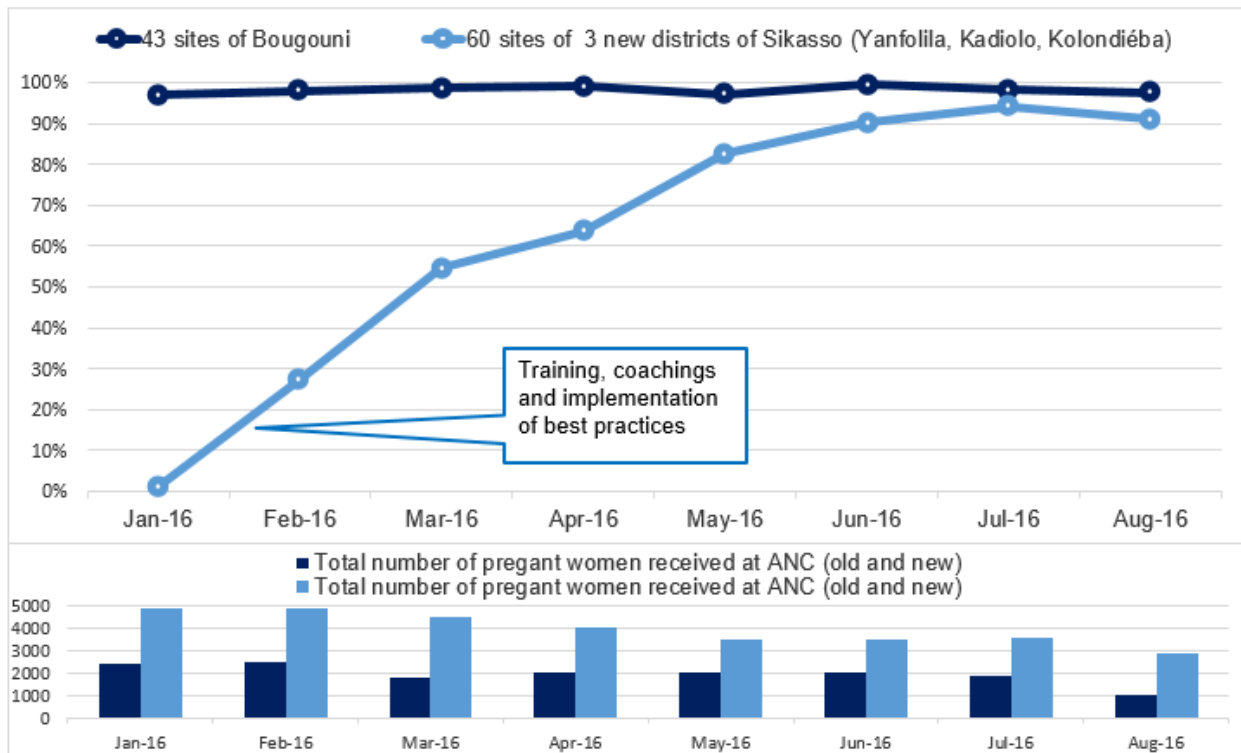
KEY ACCOMPLISHMENTS AND RESULTS

- **Systematic application of anemia screening and management for children under five and pregnant women by providers and community members within project impact areas** (Q2-Q4). During FY16, ASSIST has contributed to the improvement of anemia prevention and case management for pregnant women and children under five in 4 districts of Sikasso Region covering 105 sites in total. The project increased the number of providers and community health workers who complied with anemia systematic screening and case management at health center level and within communities. The project has strengthened the capacity of 325 providers to provide quality services during antenatal care and post-partum periods. As a result, 96% of coached and trained providers from the 105 sites are complying with norms and standards for anemia management. In each health center, anemia screening became a systematic process

during antenatal care and preventive surveillance of children. In addition, volunteers and community health workers worked together to identify, sensitize and refer pregnant women for early antenatal care services in 528 villages (first 3 months of pregnancy). In total, 2378 pregnant women have benefited from these services due to the effort of community committees trained by the project.

- Sustaining use of antenatal care services and prevention actions with community committees in 528 villages of 4 districts of Sikasso Region (Q2-Q4).** ASSIST has developed a community mobilization approach based on existing community networks led by women leaders and decision makers in the demonstration district of Bougouni. The results from this demonstration, as well as the best practices have been scaled up in three new districts to increase the number of women who will be accepted in early antenatal care including anemia prevention with iron folate tablet use. To sustain the understanding of anemia disease as a major cause of complications during pregnancy, the project has trained and coached community committees. With the skills gained through the training and orientation done by the project, the committees have initiated local actions improvement changes to support project activities such as:
 - Providing financial support to pregnant women who accepted early antenatal care (transportation and antenatal care fees);
 - sensitizing neighboring villages not include into project impact area to spread best practices;
 - Mobilizing others community leaders through theater representations and local songs/poems;
 - Organizing exchange learning visits between committees for better performance and involving local authorities into community coaching visits for further financial support without project resources.
- Figure 48** shows the level of screening for anemia for pregnant women in the demonstration district of Bougouni compared to the new three scale-up districts.

Figure 48. Mali: Percentage of pregnant women screened for anemia during ANC visits, 103 sites, Sikasso Region (Jan–Aug 2016)



- **Conducted data validation sessions** (July 2016). In Bougouni, a data validation meeting was organized to assess the quality and completion of data for Q3 with eight district coaches and 43 providers. Ninety percent (90%) of the data complied with reporting for the district.

IMPROVEMENT IN KEY INDICATORS

Activity	Indicator	Baseline	Sept 2015	Dec 2015	March 2016	June 2016	Sept 2016
Improve EONC intervention at the facility level in Kayes Region	Compliance to 3 key AMTSL norms	0% (Nov. 09) 17 sites	99%, 110 sites	99%, 123 sites	99%, 179 sites	98%, 182 sites	99%, 176 sites
	Postpartum hemorrhage rate	1.2% (Nov. 09) 17 sites	0.27%, 109 sites	0.1%, 123 sites	1%, 179 sites	0.5%, 182 sites	0.6%, 176 sites
	Compliance to ENC norms	39% (Nov. 09) 17 sites	99%, 109 sites	100%, 123 sites	98%, 179 sites	97%, 182 sites	99%, 176 sites
	Compliance to PE/E diagnostic standards	25% (Nov. 09) 17 sites	95%, 73 sites	95%, 80 sites	89%, 116 sites	92%, 150 sites	88%, 229 sites
	Compliance to PE/E treatment standards	0% (Nov. 09) 17 sites	88%, 73 sites	91%, 80 sites	88%, 116 sites	88%, 150 sites	86%, 229 sites
	Newborn with successful resuscitation	25% (Jun. 13) 47 sites	90%, 61 sites	90%, 92 sites	98%, 179 sites	89%, 182 sites	90%, 182 sites
	Compliance to antenatal care standards	40% (Jun. 14) 17 sites	95% (Mar. 15) 70 sites	97%, 102 sites	95%, 200 sites	88%, 283 sites	87%, 276 sites
Improve anemia prevention and control in Bougouni District (Sikasso Region)	% of pregnant women for whom pallor and/or hemoglobin are checked at ANC visits	0% (Jan. 13) 13 sites	99%, 43 sites	99%, 33 sites	97%, 43 sites	96%, 105 sites	98%, 105 sites
	% of pregnant women who received good counseling on how to prevent anemia during ANC visits	0% (Jan. 13) 13 sites	97%, 43 sites	97%, 33 sites	95%, 43 sites	88%, 105 sites	100%, 105 sites
	Immediate breast feeding	27% (Jan. 13) 13 sites	100%, 43 sites	100%, 33 sites	100%, 43 sites	94%, 105 sites	99%, 105 sites

Activity	Indicator	Baseline	Sept 2015	Dec 2015	March 2016	June 2016	Sept 2016
	Provision of iron	68% (Jan.13) 13 sites	100%, 43 sites	100%, 33 sites	98%, 43 sites	82% 105 sites	100% 105 sites
Increase access to antenatal care for pregnant women by involving community members	# of pregnant women identify by committee members	0 (Oct.13)	116	134	275	682	3,421
	# of pregnant women receiving ANC visit during the 1st quarter of their pregnancy	0 (Oct.13)	96	113	229	580	2,378

GENDER INTEGRATION

All project data continue to be sex- disaggregated for training, coaching visits, learning sessions and services provision at facility and community level. During the family planning campaign, the project initiated data collection age-disaggregated for FP services in 105 sites of four districts of Sikasso from April to June 2016. Data entry and analysis were done in July to August.

This data collection was focused on the factors influencing gender based violence related to FP use by women in these districts. The FP campaign was an opportunity to interview each woman accessing services and accepting to be part of the process. Of the 197 women who were interviewed, 133 sought FP services. Among those seeking FP services, 33% were not supported to do so by their husbands and families. Regarding the origin of pressure to not take FP services based on rumors, 33% comes from husbands, 22% from mothers in law, 11% from others elders' women from the villages and 33% brothers in law and friends. The project is planning to disseminate these results and work with partners to increase behavior change and communication activities on FP services and uptake in the region.

SUSTAINABILITY AND INSTITUTIONALIZATION

Stakeholders from national, regional and district levels and technical teams from other USAID-funded projects are involved in scaling up the improvement strategy and institutionalizing it at different levels of the health system. A QI committee (technical and advisory), which was set up to provide support at the regional level, has finalized the terms of reference for the development of the national QI strategy. The terms of reference were validated with all partners involved in the quality work in Mali. At the national level, ASSIST is leading the process of developing the national QI strategy with health managers from the National Directorate of Health. A technical group with representatives of all divisions within the National Directorate of Health has been set up under the leadership of the national director to facilitate the development of the national strategy, and organize the implementation of the activities at national and regional levels. The project is participating in all activities of the national technical working groups (FP, RH and nutrition groups) for technical assistance in quality improvement processes.

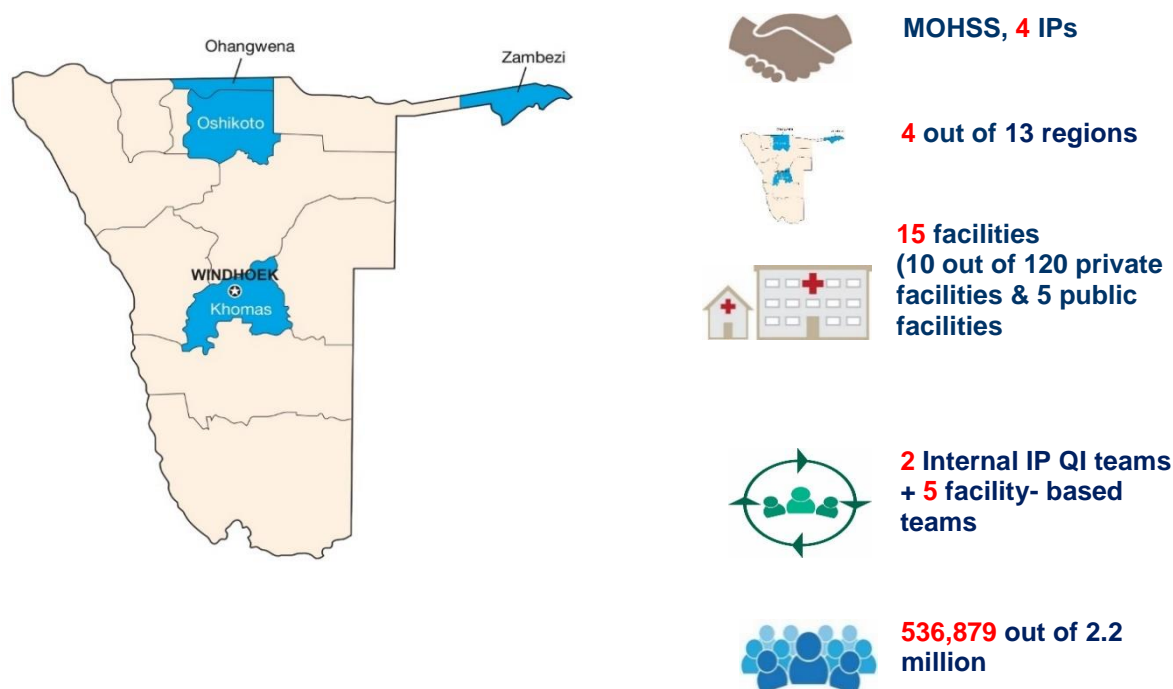
In addition, the project is providing technical assistance to the Kayes and Sikasso regional and national health management information system (HMIS) to set up a strong data collection, analysis and validation system using QI tools to complete local and regional performance for reporting. Data are consolidated at the regional level for a detailed analysis and validated with regional QI teams for decision making to improve the system at district level. At the national level, the project is contributing to the implementation of new integrated system of HMIS through District Health Information System 2 led by USAID Mali.

NAMIBIA

BACKGROUND

The USAID ASSIST Project started providing support to Namibia in October 2015. ASSIST aims to improve VMMC services in Namibia through the application of modern scientific methods within a public-private partnership collaborative involving the government and private health practitioners. More specifically, ASSIST is facilitating the effectiveness, efficiency, safety, client centeredness, timely, and technical performance in VMMC services in one out of the 13 regions in the country (Khomomas). ASSIST has been recognized as a partner specializing in quality improvement, and so the Namibia Ministry of Health and Social Services (MOHSS) and USAID have requested that ASSIST also provide support in the improvement of the HIV care and treatment (ART/PMTCT), HIV counseling and testing (HCT), and TB-HIV services. USAID Namibia has requested that ASSIST South Africa provide support on continuous quality improvement (CQI) to the MOHSS and PEPFAR partners providing HIV and TB services in four regions of Namibia. The activities are contributing towards the achievement of the PEPFAR 3.0 key agenda of impact in controlling the epidemic, efficiency in saving lives, partnership towards an AIDS-free generation as well as securing, protecting, and promoting human rights.

Scale of USAID ASSIST's Work in Namibia



PROGRAM OVERVIEW

What are we trying to accomplish?	At what scale?
1. Provide continuous quality improvement support for VMMC, HCT, PMTCT, ART, and TB-HIV care	
1.1 Reduce morbidity and mortality through provision of quality and safe VMMC services	
<ul style="list-style-type: none"> Improve the quality and ensure safety and effectiveness of VMMC services through application of CQI methodology Capacitate MOHSS, Regional, private practitioners, and PEPFAR partner staff on CQI to ensure provision of 	<ul style="list-style-type: none"> Regions: 1 out of 13 (Khomomas) Facilities in region: 12 out of 120 private practitioner facilities QI teams: 2

What are we trying to accomplish?	At what scale?
quality VMMC services and strengthen the health care system <ul style="list-style-type: none"> Support development, validation, and evaluation the programs 	
1.2 Improve and strengthen HIV counselling and testing services (HTS)	
<ul style="list-style-type: none"> Increase the number of people living with HIV who know their status and are enrolled in the wellness program 	<ul style="list-style-type: none"> Regions: TBD out of 13 QI teams: TBD
1.3 Improve the quality of care and treatment services (ART/PMTCT/TB-HIV care)	
<ul style="list-style-type: none"> Improve the quality of life for people living with HIV Reduce transmission of the virus to uninfected people Decrease the rates of TB-HIV co-infection 	<ul style="list-style-type: none"> Regions: 4 out of 13 (Khomas, Zambezi, Ohangwena, and Oshikoto) Facilities in region: 2 PMTCT/ART sites, 3 TB/HIV sites, and TBD HTS/OVC sites QI teams: 2 internal IP teams + 5 site-specific teams
2. Provide CQI training for HIV and AIDS programs	
2.1 Provide training in CQI in VMMC programs	
<ul style="list-style-type: none"> Provide support to MOHSS and AIDSFree/Abt to develop standardized VMMC CQI training curricula. Work with PEPFAR IPs and MOHSS to provide CQI training for 80 IP, MOHSS, and private practitioner staff 	<ul style="list-style-type: none"> Regions: 4 out of 13 (Khomas, Zambezi, Ohangwena, and Oshikoto) Facilities in region: 15 IP QI teams: 2 internal + 5 facility-based QI teams: 5
<input type="checkbox"/> Improvement Activity	<input type="checkbox"/> Cross-cutting Activity

* Activities will start in Oshana once reclassification of sites into CQI, EQA and SIMS sites

Activity 1. Provide continuous quality improvement support for VMMC, HCT, PMTCT, ART, and TB-HIV care

OVERVIEW

The South Africa ASSIST team is working with the Namibia MOHSS, AIDSFree/Abt, private practitioners, and other PEPFAR partners to conduct a baseline assessment at 12 private practitioner sites as well as provide intense quarterly or annual support in carrying out continuous quality improvement of VMMC services, prioritization of site-specific quality gaps, definition of site-level improvement plans, and ongoing coaching and mentoring to support the implementation of site improvement plans. Consultative and feedback meetings will be convened with all stakeholders to share objectives and findings from the baseline. Furthermore, a collaborative approach will be used once a quarter to bring together the 12 sites within the two regions to share learning and best practices.

VMMC activities include:

- Implementation of improvement strategies aimed at infection prevention and control to reduce the rate of complications
- Maintenance of accurate and complete data sets for programmatic planning and budgeting
- Facilitating skills transfer from private health practitioners to MOHSS staff
- Strengthening linkages and integration of VMMC services within the mainstream health system

HCT, PMTCT, ART, and TB-HIV care technical support includes:

- Conducting baseline assessment at PEPFAR IP-supported sites (AIDSfree/Abt; Challenge TB/KNCV; Key Pop SFH; UTAP/Intrahealth; and MCSP/Jhpiego)

- Involvement of all the IPs, MOHSS, and regional staff in generating/reviewing the baseline findings
- Categorizing the sites according to the type of support needed based on the baseline findings
- Providing monthly, quarterly, and annual CQI support based on the need to ensure that the services are provided to the WHO standards.

KEY ACCOMPLISHMENTS AND RESULTS

- **Adapted the CQI tool to the Namibian context incorporating the Namibian MOHSS infrastructure checklist and infection prevention and control standards** (Jan – Mar 2016).
- **Finalized the selection of the 12 sites to receive CQI support and scheduled baseline assessment dates for April 2016** (Jan – Mar 2016).
- **Developed and revised the assessment tool from Comprehensive HIV and AIDS back to VMMC specific quality assessment tool** (Oct – Mar 2016) to identify areas needing improvement at 12 private practitioner sites in Khomas Region. Eight quality standards are covered in the VMMC quality assessment tool: 1) Leadership and planning; 2) Management systems; 3) Infrastructure; 4) Registration, Group education and IEC; 5) Individual counselling; 6) Surgical procedure; 7) Infection prevention and control; and 8) Monitoring and evaluation.
- **Loaded Excel tool on tablets to facilitate real time report generation on the day of the baseline assessment** (Jan – Mar 2016).
- **ASSIST South Africa conducted a two-day consultative meeting with USAID Namibia Mission and four implementing partners** (Aug 2016): IntraHealth, SFH, Project Hope, and AIDSFree/Abt Associates. During the meeting, the following was accomplished:
 - Adopted quality VMMC indicators from South Africa and Uganda as standard indicators for Namibia
 - Revised existing and developed program specific CQI tools
 - Revised assessment tool for VMMC
 - Supported quality indicator sets for all programs supported
- **Revised qualitative and quantitative project monitoring tools based on areas to be supported** (July – Sept 2016). Couples testing for HIV will be tracked, to monitor female partner involvement of males attending VMMC services. Data will be disaggregated by age and sex.

Activity 2. Provide CQI training for HIV and AIDS programs

OVERVIEW

Strengthening the implementation and maintaining quality in the VMMC, HTS, ART, PMTCT, and TB-HIV services and integrated and patient centred manner in Namibia will enable the MOHSS to move towards the achievement of PEPFAR's 90-90-90 goals. To facilitate this, USAID identified the need for CQI support in HIV and AIDS services provided through a public-private partnership. One of the important areas still requiring specific attention is the need to develop and provide comprehensive and consistent CQI capacity building/training for MOHSS and IP staff involved in VMMC, HCT, ART, PMTCT, or TB-HIV service provision.

KEY ACCOMPLISHMENTS AND RESULTS

- **Developed schedule and training slides for EQA to be used in the combined EQA/CQI training planned for May 2016 to facilitate orientation of the relationship and differences between the two by MOHSS, USAID Namibia, and Abt Associates staff** (Mar 2016).

GENDER INTEGRATION

No gender integration or equity-related activities executed. These will be addressed once baseline is completed and site mentoring and coaching has started. Baseline and project data for HTS, ART, and TB-HIV will be received from implementing partners, but ASSIST will encourage and support disaggregating these by age and sex in order to identify and address age- and gender-related gaps.

SUSTAINABILITY AND INSTITUTIONALIZATION

ASSIST is building the capacity of private sector health practitioners and the MOHSS staff in Namibia to incorporate CQI in VMMC, HCT, ART/PMTCT, and TB-HIV services through providing quality

improvement training sessions, mentorship, and technical assistance. The project is working with the MOHSS, other PEPFAR partners involved with HIV/AIDS and TB services that support the MOHSS in Namibia, and private sector health practitioners to ensure utilization of CQI methodologies and programmatic data to identify priority areas, gauge performance, and plan for scale-up of services.

SOUTH AFRICA

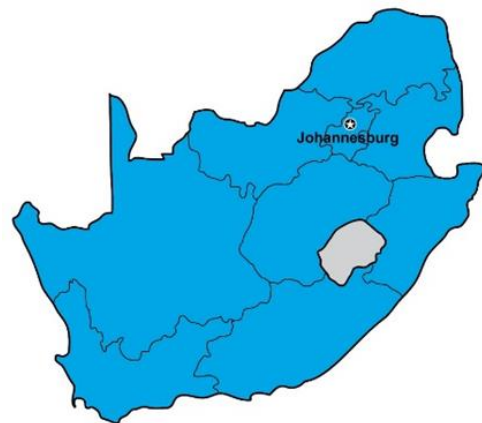
BACKGROUND

HIV/AIDS is a major health concern in South Africa. Approximately 6.8 million people live with HIV, 18.9% of adults aged between 15 and 49 are infected with the virus, and approximately 1,000 adults are infected with HIV each day (UNAIDS, 2014). A 2011 review of the National Strategic Plan 2007–2011 by the South African National Department of Health showed mixed achievements: despite much headway having been made, there are key challenges that should be addressed in order to scale up HIV prevention, treatment, care, and support throughout the country.

Since 2000, URC has worked in South Africa through the Quality Assurance Project and its follow-on, the USAID Health Care Improvement Project (HCI). ASSIST started activities in South Africa in October 2013. ASSIST continues to work in the five priority provinces at the provincial and district levels to improve quality of care by providing support and mentorship in planning, implementation, evaluation, and documentation. In addition, starting in May 2014, ASSIST began working with approximately 134 PEPFAR-supported sites in all nine provinces of South Africa to improve the quality and safety of medical male circumcision (VMMC) services.

In FY16, ASSIST in South Africa has been continuing to work on improving the quality of the VMMC program. We are working to capacitate the Department of Health (DOH) staff at all levels on the use of continuous quality improvement (CQI) methodology and tools, and supporting Technical Working Groups (TWG) at the national and provincial levels to incorporate QI as a fundamental health system function. Additionally, through both national and provincial level learning sessions, we are able to share lessons learned from implementation of CQI at facility level and site-specific innovations and good practices.

Scale of USAID ASSIST’s Work in South Africa



■ HIV / AIDS



DOH, PDOHs, USAID & CDC IPS



9 out of 9 provinces
25 out of 52 districts



100 health facilities



95 QI teams



18 out of 54 million

PROGRAM OVERVIEW

What are we trying to accomplish?	At what scale?
1. Continuation of continuous quality improvement in VMMC programs	
<ul style="list-style-type: none"> Improve the quality and safety of VMMC services by applying CQI methodology Capacitate NDOH and PDOH staff on CQI methodology Assist with development of, and participation in Technical Working Groups (TWGs) at NDOH and PDOH Support communication between NDOH, PDOH and PEPFAR partners, regarding CQI initiatives Collaborate with NDOH and demand creation partners to conceptualize a CQI framework for demand creation 	<ul style="list-style-type: none"> Provinces: 8 Facilities: 100 QI teams: 95
2. Provision of training in CQI in VMMC programs	
<ul style="list-style-type: none"> Provide support to NDOH and WHO to develop standardized VMMC CQI training curricula. Work with PEPFAR IPs and DOH to provide CQI training for 400 IP and DOH staff 	<ul style="list-style-type: none"> National and all 9 provinces

Improvement Activity
 Cross-cutting Activity

Activity 1. Continuation of continuous quality improvement in VMMC programs

OVERVIEW

VMMC has been shown to be one of the most effective strategies in preventing the rise in new HIV infections. Currently, the NDOH is implementing the VMMC program in partnership with PEPFAR IPs. While much work has been done to increase the number of circumcised men in South Africa, more work is needed to ensure the provision of safe, effective, and high-quality VMMC services. One of the main goals of PEPFAR and NDOH is to improve and sustain the quality of the VMMC program, in accordance with national and international standards. Strengthening the implementation and maintaining quality in the VMMC program will enable the NDOH to scale up the VMMC program and to reach 80% of HIV-negative men aged between 15-49 years (4.3 million men) in order to avert 500,000 new infections. Strengthening the NDOH and PDOH systems to integrate CQI in the VMMC program is also critical for scale-up and sustainability of the program.

KEY ACCOMPLISHMENTS AND RESULTS

- Conducted one CQI VMMC learning session with DOH and IP staff in Mpumalanga and Limpopo provinces** (Nov 2015). Successful tested changes around clients follow up and infection prevention were presented by 15 sites at the learning session, 5 sites drafted their action plans from the presentations of the tested changes. Staff members from all 23 sites in Mpumalanga and Limpopo provinces participated in the learning and sharing workshop.
- Conducted CQI follow-up assessments, coaching, and mentoring to 123 supported sites** (Oct 2015 – Sept 2016). The results of the assessments revealed significant improvements in the provision of VMMC services: most sites achieved >90% in all standards in the 5th assessment (see **Figure 49** and **Figure 50**, respectively, for progress across USAID and CDC supported sites). The changes implemented include: staff orientation on how to comply with VMMC CQI standards, especially surgical procedures and infection prevention; and establishing relationships between IPs, health care facilities, and the DOH for acquisition of guidelines and relevant documents. Continued support from PEPFAR and the DOH has facilitated the success and uptake of CQI at health facilities.

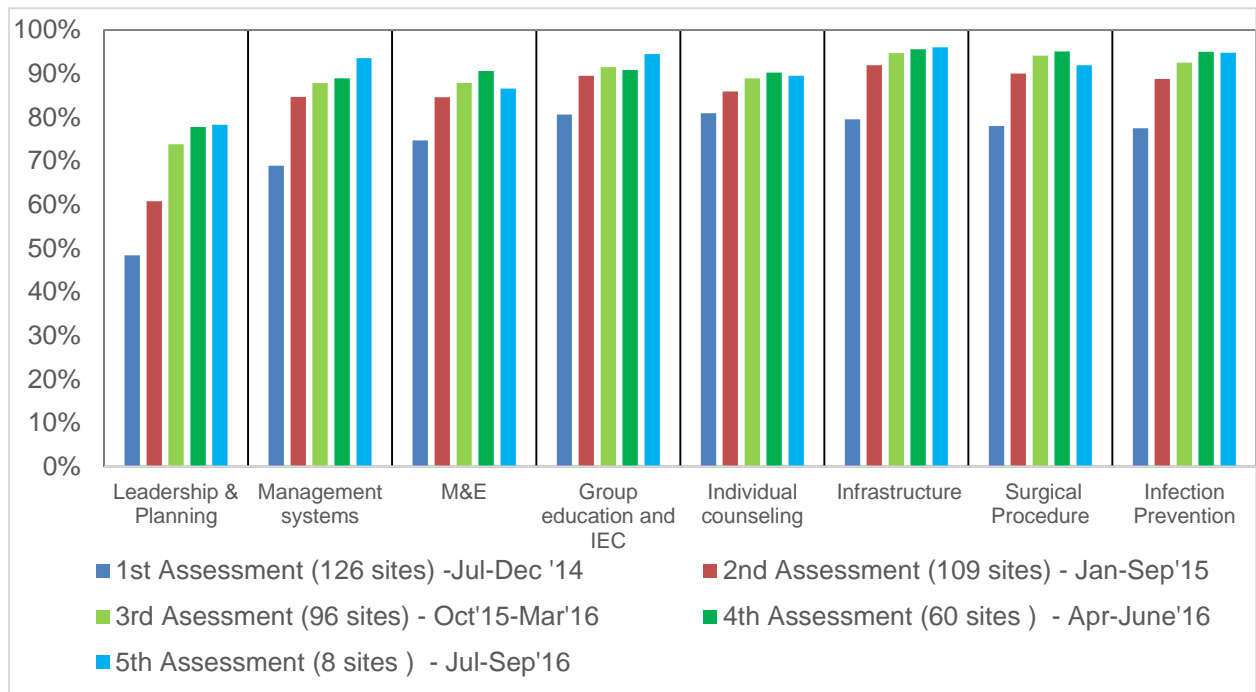
Figure 50. South Africa: Dashboard for CDC sites receiving CQI support, 49 sites (June 2014 – Sept 2016)

Row	Jul-Dec'14							Jan-Sep'15							Oct'15-Mar'16							Apr-Jun'16							Jun-Sep'16						
	Average of Leadership	Average of Management	Average of M&E	Average of Group	Average of Individual	Average of Infrastructure	Average of Surgical	Average of Infection-	Average of Leadership	Average of Management	Average of M&E	Average of Group	Average of Individual	Average of Infrastructure	Average of Surgical	Average of Infection-	Average of Leadership	Average of Management	Average of M&E	Average of Group	Average of Individual	Average of Infrastructure	Average of Surgical	Average of Infection-	Average of Leadership	Average of Management	Average of M&E	Average of Group	Average of Individual	Average of Infrastructure	Average of Surgical	Average of Pre-Pex	Average of Infection		
1	50.0	63.0	60.0						87.5	90.2	93.5	76.7		75.7	84.8	43.9	83.3	91.9	96.0	96.9	95.8	100.0	97.8	81.3											
2	29.0	75.1	83.3	95.8	95.8	76.8	88.5	85.9	85.7	92.2	85.1	100.0	100.0	96.1	98.3	94.8	73.3	90.9	71.3	94.7	91.2	88.4	97.6	97.4											
3	87.5	79.0	94.5	90.6	87.6	91.3	81.8	64.9	36.7	75.8	75.8	79.8	62.2	84.9	92.8	95.2	83.3	96.3	85.0	100.0	96.7	93.3	99.5	100.0											
4	66.5	42.0	74.2	97.0	95.5	96.3	83.7	86.8																											
5	50.0	84.5	89.2	58.7	88.3	79.0	76.1	97.5																											
6	12.5	48.1	66.2	64.3	45.8	87.0	74.8	69.2	56.7	97.2	73.6	100.0	91.4	90.2	93.2	86.7	73.3	88.7	83.6	86.0	94.6	88.4	92.4	94.9											
7	12.5	37.2	55.7	97.0	96.3	74.3	75.4	57.9																											
8	58.0	91.1	81.2	100.0	86.5	83.7	89.0	85.0	50.0	86.7	86.0	97.5	97.5	91.5	94.3	100.0	75.0	89.8	100.0	100.0	100.0	100.0	100.0	100.0											
9	100.0	90.8	100.0	85.6	95.5	85.7	88.8	91.0	83.3	91.1	82.4	92.9	81.2	97.7	88.8	95.2	100.0	64.3	93.8	100.0	100.0	73.7	100.0	97.2											
10	25.0	91.8	61.2	97.0	95.8	31.0	55.5	77.6	66.7	92.2	82.5	95.0	100.0	91.5	95.0	95.8	83.3	93.5	95.8	97.5	90.0	94.9	95.6	87.9											
11	83.0	54.2	66.0	96.8	81.5	92.0	77.5	90.0	91.7	98.1	95.8	95.8	93.1	97.7	93.4	83.2	100.0	89.3	97.9	100.0	100.0	100.0	100.0	86.8											
12	54.0	61.6	89.2	81.3	81.0	78.8	76.7	96.9	25.0	75.6	69.1	92.9	93.9	82.5	81.9	93.6	83.3	76.5	72.1	91.7	100.0	93.2	92.7	96.5											
13	12.5	50.3	72.8	55.5	73.3	68.0	85.1	82.6	66.7	86.1	94.8	94.7		98.4	95.5	98.9	83.3	95.6	93.8	94.7	93.2	94.6	95.8	95.6											
14	66.5	71.8	88.5	100.0	73.2	91.3	92.2	95.0	83.3	81.9	89.3	97.2	87.1	94.6	97.0	99.1	100.0	96.9	93.2	92.9	86.3	98.9	95.0	100.0											
15	12.5	65.7	67.2	97.0	87.3	72.8	81.0	58.8	18.1	70.2	80.7	91.7	97.5	86.8	87.7	76.5	25.0	75.9	92.1	83.3	88.9	87.4	98.3	95.1											
16	33.0	59.1	75.2	83.3	100.0	96.3	89.1	67.0	83.3	86.5	97.9	100.0	95.4	86.5	90.1	98.3	75.0	88.5	78.1	92.6	100.0	91.2	96.4	95.3											
17	25.0	32.1	43.3																																
18	12.5	42.8	61.7	87.0	81.3	85.3	75.9	85.7	83.3	91.7	100.0	97.2	100.0	94.2	93.2	84.8	40.0	88.9	80.8	91.9	76.5	95.3	77.0	80.2											
19	100.0	94.0	97.5	93.3	93.3	100.0	86.6	87.3	100.0	87.0	86.9	100.0	82.5	100.0	97.5	99.3	83.3	91.3	97.9	100.0	97.2	91.1	86.3	74.4											
20	83.0	78.7	88.0	89.8	100.0	78.5	78.9	77.0	83.3	91.3	97.9	100.0	97.2	91.1	86.3	74.4																			
21	70.5	77.9	89.2	80.5	100.0	88.3	77.6	86.7	66.7	75.4	86.4	78.8	72.6	94.6	74.0	87.7																			
22	66.5	65.9	55.8	94.3	74.3	76.3	80.0	71.8	100.0	75.2	91.7	78.1	96.2	83.4	88.8	57.8	83.3	81.5	95.8	100.0	86.1	84.7	73.6	55.4											
23	58.0	68.3	70.7	66.8	78.3	83.5	81.2	85.7	75.0	95.6	97.6	97.5	100.0	97.7	95.3	98.5	73.3	94.4	70.2	80.4	89.4	92.5	96.8	93.8											
24	83.0	57.5	95.2	85.8	82.2	74.5	89.5	84.6	66.7	78.1	82.0	94.4	84.5	98.9	95.3	87.9																			
25	12.5	61.8	74.0	85.8	64.7	58.3	74.7	93.5	75.0	85.9	100.0	100.0	100.0	96.6	96.8	95.3	83.3	88.3	77.8	62.4	86.8	97.6	97.1	98.3											
26	83.0	55.4	80.8	93.8	95.0	53.0	60.6	72.7	83.3	86.3	97.9	89.2	98.3	88.4	94.6	94.0	100.0	100.0	99.6	95.0	86.0	95.3	94.6	97.3											
27	50.0	84.1	90.8	48.3	57.2	59.5	85.9	58.1	83.3	86.3	97.9	89.2	98.3	88.4	94.6	94.0	100.0	100.0	99.6	95.0	86.0	95.3	94.6	97.3											
28	58.3	85.0	83.0	88.7	94.2	90.9	84.0	96.7																											
29	41.7	58.3	65.3	91.7	100.0	96.2	84.2	76.5																											
30	66.7	41.5	49.9	80.4	96.2	92.1	91.6	95.2																											
31	50.0	63.0	60.0					84.1	58.3	85.0	75.0	18.3	39.4	93.0	77.2	58.5	50.0	85.6	91.4	76.7	80.1	92.6	77.5	68.2											
32	50.0	58.6	40.2	64.0	86.5	88.0	96.3	78.3	50.0	78.0	66.6	100.0	91.1	97.7	100.0	84.0	83.3	85.2	95.0	100.0	100.0	100.0	100.0	98.5											
33	100.0	77.5	62.5	83.6	54.4	96.4	69.1	76.6	100.0	99.1	95.5	100.0	100.0	96.6	95.0	96.5																			
34	0.1	14.8	55.2	88.5	96.8	89.3	90.9	78.7	46.7	75.7	79.6	91.6	67.7	94.2	98.3	82.6																			
35	41.5	77.5	97.5	84.5	79.7	79.8	84.7	92.9	83.3	97.5	97.5	88.9	88.6	96.4	99.5	100.0	83.3	82.4	99.6	65.1	98.6	98.4	97.6	100.0											
36	25.0	70.4	78.5																																
37	83.0	67.5	60.2	54.0	91.8	72.8	68.2	86.0	83.3	90.7	92.2	97.2	79.5	85.2	90.8	96.7																			
38	83.0	87.0	94.8	74.0	70.3	94.8	87.0	78.7	66.7	91.7	90.8	100.0	85.1	94.2	96.2	94.0	80.0	90.4	88.2	87.5	94.6	90.3	97.1	100.0											
39	83.0	88.1	92.2	95.0	100.0	95.8	87.4	80.7	66.7	89.6	93.5	100.0	93.8	85.3	93.6	97.4	66.7	85.9	78.6	91.7	100.0	86.0	92.4	97.4											
40	83.0	87.6	81.8	72.8	95.8	68.0	77.6	26.5	100.0	96.3	84.6	78.8	86.9	95.3	98.1	96.9	100.0	85.2	95.0	100.0	100.0	97.3	98.7	97.3											
41	50.0	84.4	91.5	86.3	78.2	56.5	91.5	75.6	70.8	92.6	86.9	86.9	81.0	98.9	98.5	97.9	100.0	100.0	95.8	94.4	87.9	98.9	98.2	96.4											
42	25.0	79.1	91.7	83.5	93.0	80.0	70.1	85.8																											
43	100.0	94.9	100.0	84.8	84.3	86.3	77.3	84.4	58.3	92.2	97.6	100.0	94.6	98.9	98.5	95.7	66.7	52.0	48.7	84.7	61.5	64.6	94.3	96.1											
44	70.5	51.7	78.8		94.3	77.5		71.8	56.7	81.1	82.5	66.9	89.3	97.7	90.9	87.4	83.3	89.3	85.4	86.4	84.1	89.0	81.2	76.0											
45	66.5	82.2	64.3	74.3	67.8	59.3	71.3	62.1																											
46	12.5	67.5	79.0	66.3	76.6	96.3	95.1	87.7	100.0	94.0	97.9	75.6	72.2	93.7	98.2	99.3	100.0	92.3	97.9	100.0	98.6	93.3	96.2	93.3											
47	83.0	82.9	91.7	40.0	68.5	83.3	73.8	70.0																											
48	100.0	98.3	100.0	60.8	84.3	85.3	96.9	88.1										0.0	44.6	66.4	66.9	83.7	91.5	98.5	99.2										
49	28.6	92.7	61.3	80.8	72.8	82.0	94.6	88.9	66.7	64.3	100.0	100.0	75.8	82.7	76.3																				
T	55.1	69.3	76.5	81.3	84.3																														

CQI data and acting upon it. QI teams evaluated their indicators against activities that occurred in the previous month at their sites.

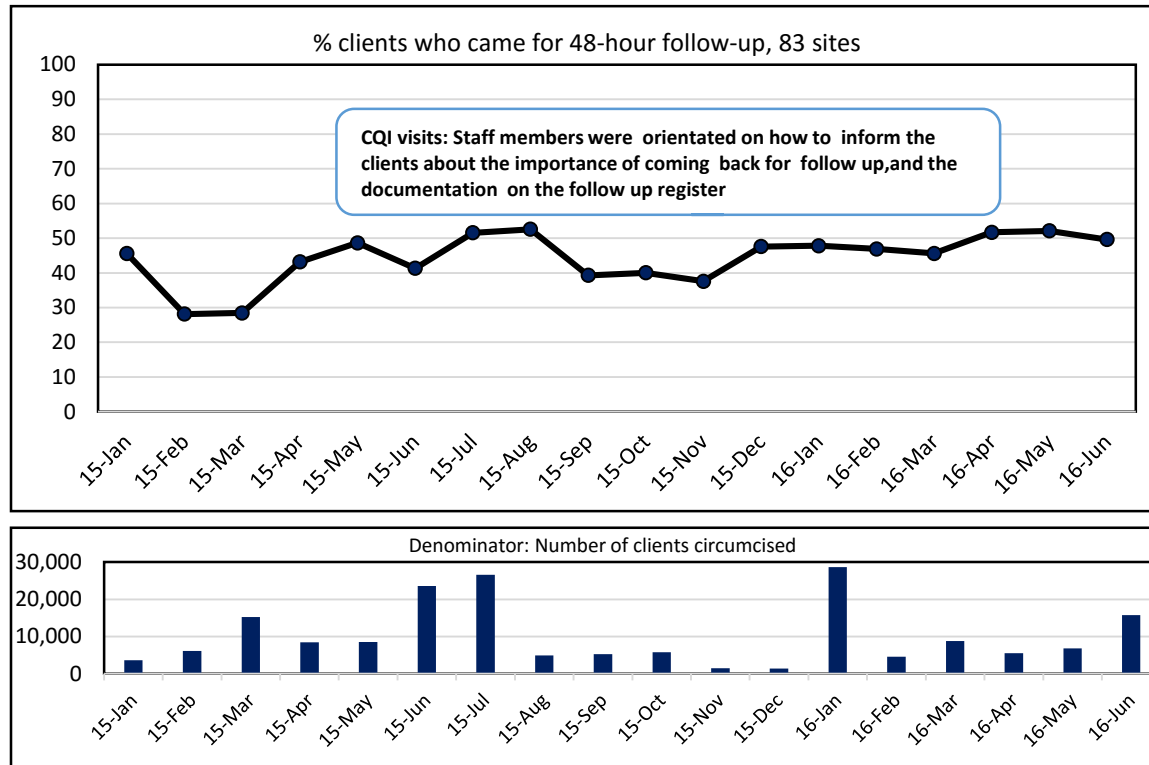
- **Figure 51 shows baseline and re-assessment at 3-24 months for sites receiving assessments during June 2014 and September 2016.** The data has been extracted from the CQI database – including sites that have completed fifth assessments. **Figure 52** shows the proportion of VMMC clients who returned to the clinic for the WHO-recommended 48-hour post-operative follow-up visit.

Figure 51. South Africa: Baseline and re-assessment at 5-24 months for sites receiving two to five assessments (July 2014 - Sept 2016)



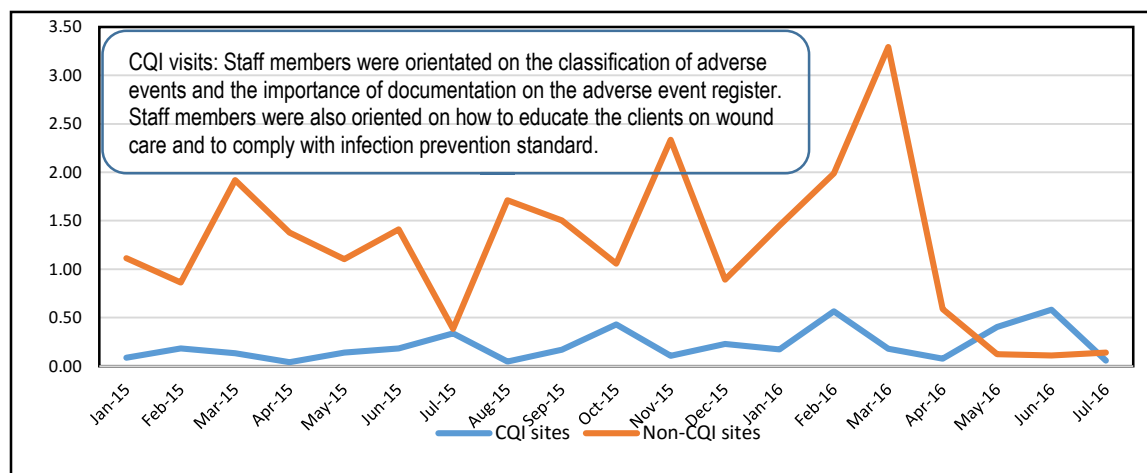
**Data source: VMMC CQI program report*

Figure 52. South Africa: Percentage of VMMC clients returning for 48-hour follow-up, 83 CQI sites (Feb 2015 – June 2016)



- Figure 53 shows the proportion of MMC clients who experienced adverse events in 25 CQI supported sites compared to non-CQI sites (312) in Kwa-Zulu Natal.** The rates of adverse events were higher in the non-CQI sites compared to the CQI sites, but the non-CQI sites show a large decrease in adverse events from Mar – Apr 2016, which we think is due to underreporting. This is a challenge in KZN and was highlighted by the KZN Provincial VMMC Coordinator and M&E Manager during the recent learning session we had in KZN. A number of sites are still afraid to report adverse events although there is evidence of increases in adverse events. This data has been extracted from the Department of Health District Health Information System.

Figure 53. South Africa: Rates of moderate or severe adverse events, 25 CQI and 312 non-CQI sites, KZN (Jan 2015 – July 2016)

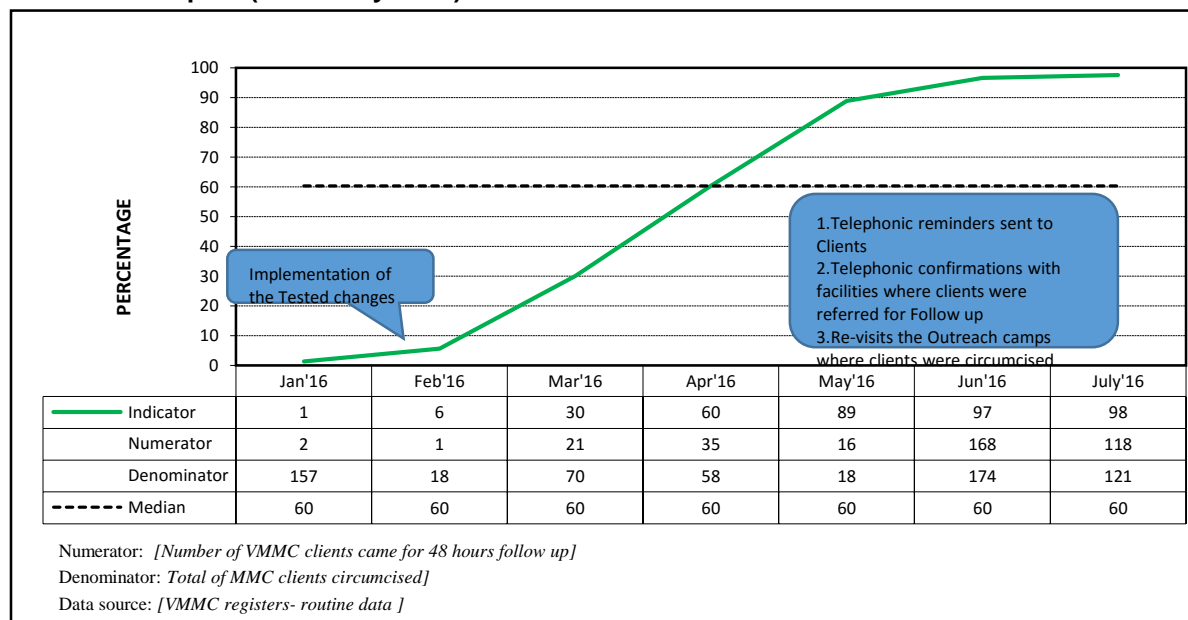


		Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16
No of MMCs performed	CQI sites	1169	2206	2280	2458	2898	2742	3542	2212	1178	1391	942	438	581	354	560	1 332	995	1 550	1 789
	Non-CQI sites	5652	10675	9592	10023	10877	10986	13524	9999	7648	5109	2911	1457	5445	8746	9079	9536	7247	11874	10074
Percentage of AEs	CQI sites	0,09	0,18	0,13	0,04	0,14	0,18	0,34	0,05	0,17	0,43	0,11	0,23	0,17	0,56	0,18	0,08	0,40	0,58	0,06
	Non-CQI sites	1,11	0,86	1,92	1,38	1,10	1,41	0,38	1,71	1,50	1,06	2,34	0,89	1,45	1,99	3,29	0,59	0,12	0,11	0,14

*Data source: KwaZulu-Natal District Health Information System

- **Figure 54** shows that VMMC client follow-up rate at 48hrs increased from <6% to >90% in Botlokwa hospital, a CQI-supported site in Limpopo.

Figure 54. South Africa Proportion of VMMC clients who came for 48 hours follow-up, Botlokwa Hospital (Jan – July 2016)

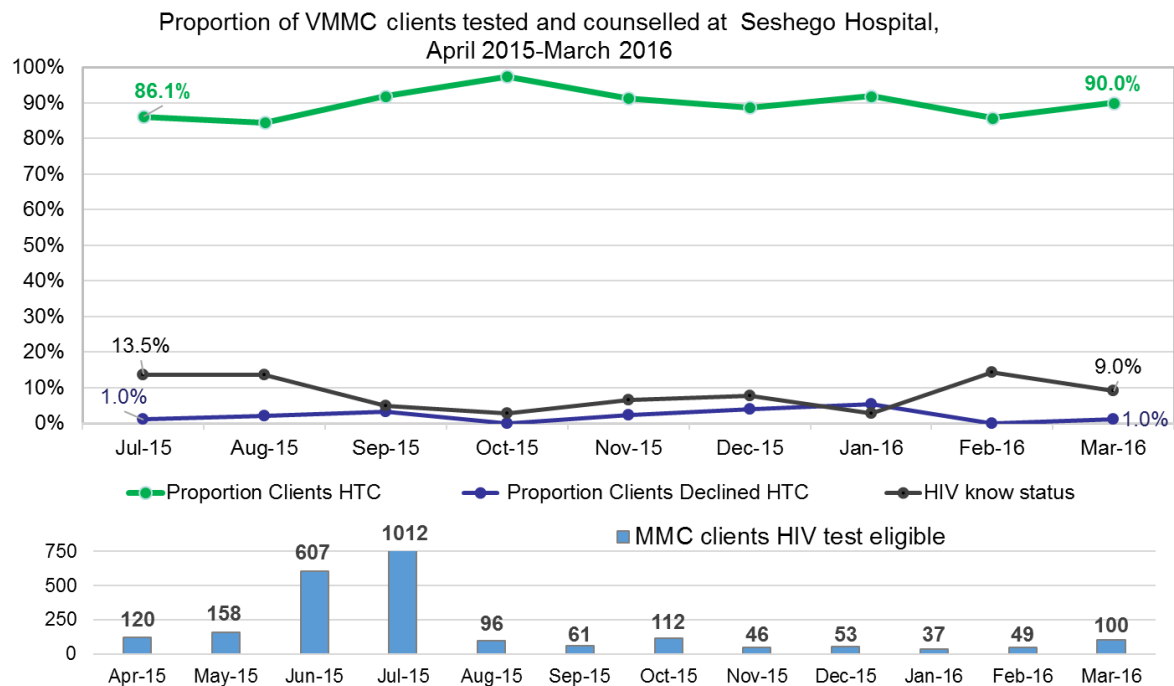


*Data source: Facility registers

- **Figure 55** shows that the HIV test rate increased from 86% to 90% in Seshego Hospital (CQI-supported site in Limpopo) (Apr 2015-Mar 2016). Of 64 men who tested HIV-positive, 46 (72%) were successfully linked to HIV care and treatment. This experience was shared with

ASSIST VMMC teams from other countries during an internal ASSIST coordination webinar in May.

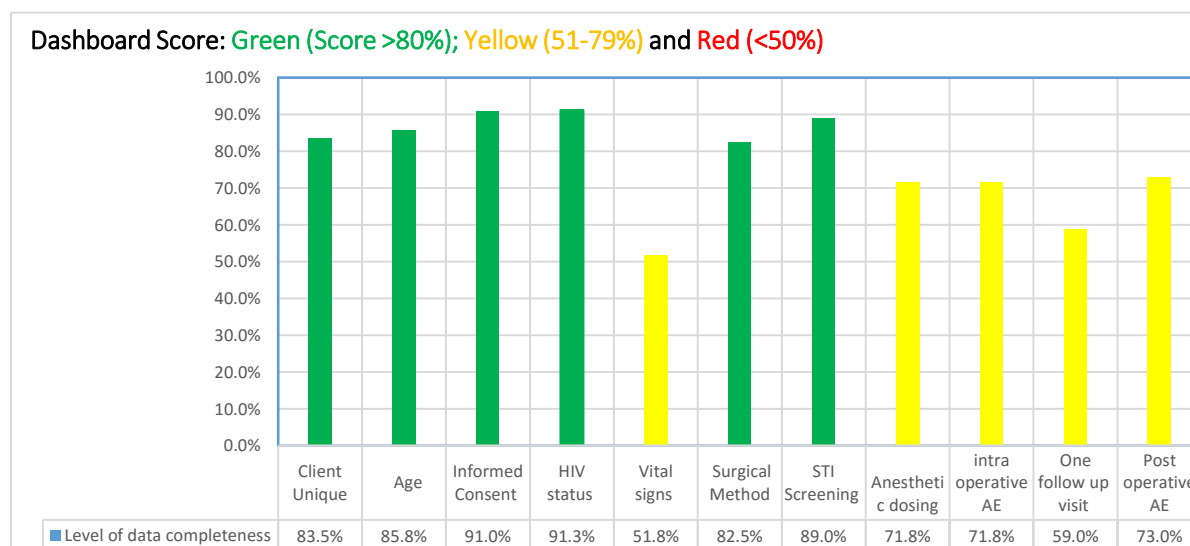
Figure 55. South Africa: Proportion of VMMC clients tested and counselled at Seshego



Hospital, Limpopo (Apr 2015 – Mar 2016)

- **Developed terms of reference and participated in VMMC Technical Working groups (TWGs) at provincial level in Mpumalanga Province (Feb – Mar 2016).**
- **Developed, applied and revised MMC CQI M&E system, database, and tools in line with the VMMC program development (July - Sept 2016).**
- **Conducted data validation and mentorship to ensure provision of good quality VMMC data (July – Sept 2016).** Findings reveal that in more than 40% of the 20 facilities sampled, there was no documentation on the follow-up status, adverse events, and vital signs (especially temperature) (see **Figure 56**).

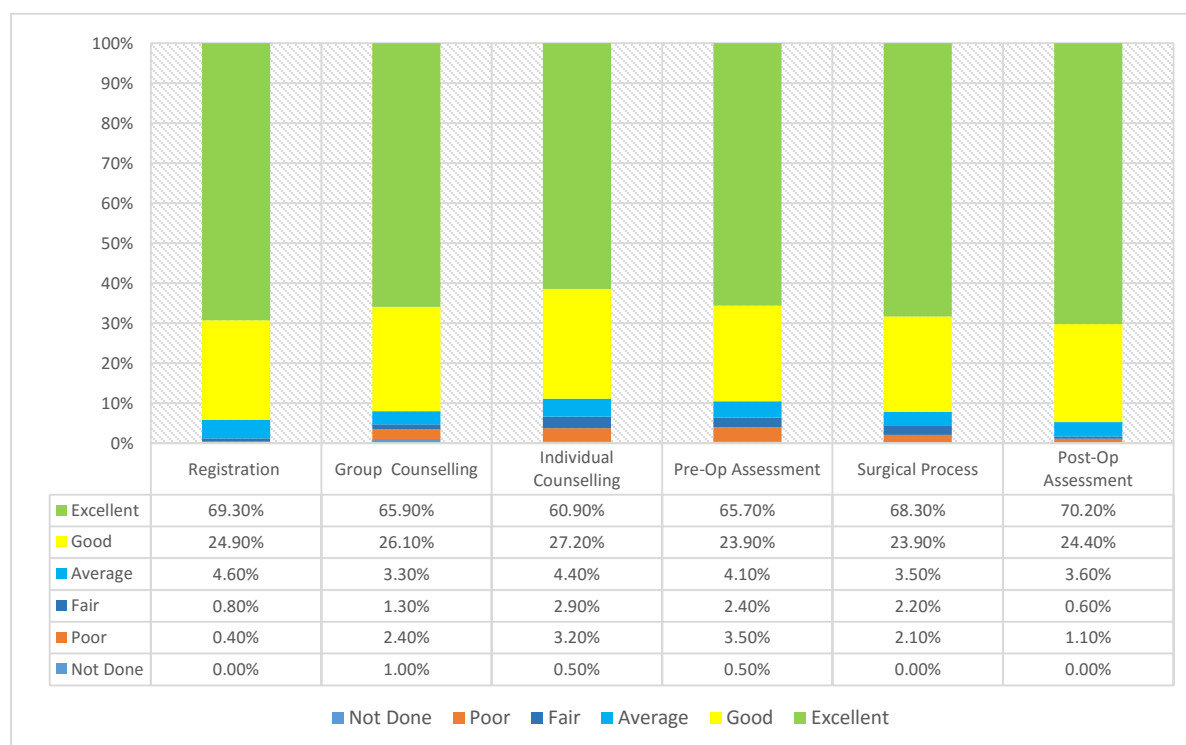
Figure 56. South Africa -- Baseline findings. Data validation exercise: Percentage of completeness of client record at 20 facilities, (400 records, July – Sept 2016)



Source: ASSIST project program report data

- **Conducted a client satisfaction survey among 210 VMMC clients (July – Sept 2016).** 70% reported to have received ‘Excellent’ VMMC services (Figure 57).

Figure 57. South Africa: Preliminary findings on client satisfaction survey per standards (n=210), South Africa (July-Sept 2016)



Source: ASSIST project program report data

Activity 2. Provision of training in CQI in VMMC programs

OVERVIEW

To facilitate scaling up of VMMC, the need for a deliberate and concerted effort towards CQI was identified by PEPFAR in 2014. One of the important areas still requiring specific attention, which ASSIST is working on, is the need to develop and provide comprehensive and consistent CQI capacity building / training for DOH and IP staff involved in VMMC service provision.

KEY ACCOMPLISHMENTS AND RESULTS

- **Conducted CQI trainings in 8 provinces for a total of 442 participants**, including VMMC QA managers, coordinators, health providers, and IPs (Oct 2015 – Sep 2016).

Province	Oct - Dec 2015	Jan - Mar 2016	Apr - Jun 2016	Jul – Sep 2016	# of people trained on CQI
Eastern Cape		25	29		54
Free- State				14	14
Limpopo		42		30	72
Mpumalanga				42	42
Gauteng		28		25	53
Northern Cape				15	15
Kwa-Zulu Natal	36	59		30	125
North West	39			28	67
Total	75	154	29	213	442
Target					400

IMPROVEMENT IN KEY INDICATORS

Activity	Indicators	Baseline	Sept 2015	March 2015	June 2016	Most recent value 2016
Continuation of CQI in VMMC programs	# of MMCs performed	90,903 July-Sept 2014 -123 sites	191,619 Cumulative -108 sites	212,854 Cumulative to Dec 2015 -108 sites	232,208 Cumulative to Mar 2016 -108 sites	274,723 Cumulative to Jun 2016 -108 sites
	Aggregated quality standards score	74% (July-Sept 2014) -123 sites	87.9% (Sep 2015) - 108 sites	89.1% by end of March 2016 - 84 sites	91.2% by end of June 2016 - on 51 sites received 4 th assessment	90.1% by end of Sept 2016 - on 8 sites received 5 th assessment
	% of VMMC clients who came for 48-hour follow-up	45.5% (Jan 2015) – 83 sites In process of collecting this data in other provinces	39.3% (Sept 2015) – 83 sites In process of collecting this data in other provinces	47.6% (Dec 2015) – 83 sites In process of collecting this data in other provinces	47.6% (Mar 2016) – 83 sites In process of collecting this data in other provinces	49.6% (June 2016) – 83 sites In process of collecting this data in other provinces

Activity	Indicators	Baseline	Sept 2015	March 2015	June 2016	Most recent value 2016
	Rates of moderate or severe adverse events (2-day follow up)	KZN – 0.09% (Jan 2015) – 25 sites In process of collecting this data in other provinces	KZN – 0.17% - (Sept 2015) - 25 sites. In process of collecting this data in other provinces	KZN – 0.23% (Dec 2015) - 25 sites. In process of collecting this data in other provinces	KZN – 0.15% (Mar 2016) - 25 sites. In process of collecting this data in other provinces	KZN – 0.14% (July 2016) - 25 sites. In process of collecting this data in other provinces
Provision of training in CQI in VMMC programs	# of individuals trained on CQI	0 (July-Sept 2015)	0	222 (Mar 2016)	237 (June 2016)	442 (Sept 2016)

GENDER INTEGRATION

No gender integration has taken place.

SUSTAINABILITY AND INSTITUTIONALIZATION

The USAID ASSIST Project is building the capacity of DOH staff at district, provincial, and national levels to continue with quality work through formal QA/QI training sessions and provision of mentorship and technical assistance in HIV prevention. In support of VMMC programs, ASSIST works with each of the provinces and districts to build IP and DOH capacities in order to be able to utilize CQI methodologies and programmatic data to identify priority areas, gauge performance, and plan for scale-up of services. ASSIST also supports the DOH and IPs to standardize MMC tools and develop QI indicators. In addition, ASSIST works with District Management Teams to support VMMC supervision and advocate for the integration of the VMMC program into overall primary health care (PHC) service provision. ASSIST uses VMMC learning sessions where best practices are shared among provincial managers, implementing partners, and facility staff. These learning sessions help to strengthen relationships and support between National Department of Health (NDOH), Provincial Department of Health (PDOH) and implementing partners.

SOUTHERN AFRICA REGION

BACKGROUND

Malnutrition in the Southern Africa Region is a persistent problem. HIV and malnutrition interact in a vicious cycle. The infection causes or aggravates malnutrition through reduced food intake, increased energy needs, impaired nutrient absorption, and nutrient losses associated with frequent and persistent diarrhea. Malnutrition can hasten the progression of HIV, further weakening the immune system, increasing susceptibility to opportunistic infections and reducing the effectiveness of both ART and treatment of opportunistic infections. Thus, nutrition and food security support is a critical component of a comprehensive HIV/AIDS programs to improve clinical outcomes for PLHIV and to mitigate the impact of the disease on HIV-affected families.

South Africa is one of the 34 countries that account for 90% of the global burden of malnutrition. According to the Southern Africa's Child Healthcare Problem Identification Programme's Saving Children Report (2012-2013) of all hospitalized children that died in 2012-2013, 29% were underweight for age and 30% were severely malnourished. The South Africa case fatality rate (CFR) of in-hospital severe acute malnutrition of children under age 5 is at 11%, way above the WHO threshold of <5% (DHIS 2014/2015). In Lesotho, malnutrition is the underlying cause of 22% of child

mortality. According to a 2013 MOH annual review, a CFR of 19% due to severe acute malnutrition (SAM) was reported in hospitals across seven districts. Findings from the 2003 Mozambique Demographic and Health Survey reports that acute undernutrition contributes to 36% of child deaths. A child mortality study conducted by the University of Botswana in 2013 indicated that one of the major causes of child mortality is malnutrition. Sixty-three percent (63%) of children who died had some degree of malnutrition.

The USAID ASSIST Project has been given the mandate to contribute to the evidence base on how integration of Nutrition Assessment Counselling and Support (NACS) services into HIV/AIDS care can influence engagement, adherence, and retention of PLHIV. In addition, the project is working to reduce the prevalence of moderate and severe acute malnutrition and case fatality rates associated with SAM.

Currently, ASSIST's work focuses on two provinces in South Africa with high number of SAM admissions and/or CFR (Free State – 12%, KwaZulu-Natal – 10%). Following a baseline assessment, an average of three feeder facilities per hospital will be selected based on the number of SAM referrals for admissions to the respective hospitals. This will add up to about 12 selected sites for support in South Africa.

A similar approach was followed in the selection of sites in Lesotho and Mozambique. In Lesotho, 10 facilities across 5 districts will be supported. In Mozambique, 4 facilities across 2 provinces will be supported with assistance from clinical partners. In Botswana, 5-10 facilities will be chosen for support. Thus, the proposed number of sites for support in the region will be about 36.

SOUTH AFRICA					
Province	District	Facility with high number of admissions and/or deaths	# SAM Admissions	# SAM Deaths	CFR
Free State	Lejweleputswa	Bongani Hospital	61	18	29.5%
	Fezile Dabi	Boitumelo	24	6	25%
KwaZulu Natal	Ugu	Murchison Hospital	123	9	7.3%
REGIONAL COUNTRIES					
Botswana	We will work with the USAID missions to select a maximum of 10 sites.				
Lesotho	Maseru	Scott Hospital St. Joseph's Hospital	Awaiting data from MOH		
	Mohale's Hoek	Mofumahali Hospital Holy Cross Hospital			
	Mafeteng	Motsekoua Hospital			
	Leribe	Maputsoe Filter Clinic Maputsoe SDA Clinic Mamohau Hospital			
	Berea	Maluti Hospital Berea Hospital			
Mozambique	Two FANTA sites in Nampula Province: Angoche's Rural Hospital Mecubúri Health Centre		Awaiting data from MOH		
	Two CHASS sites in Tete Province: TBD				

ASSIST will be providing technical assistance in quality improvement (QI) for this initiative and work with site level staff to implement recommended approaches. ASSIST's objectives are to:

- Build the capacity of service delivery organizations (Ministry of Health/ stakeholder) to improve the effectiveness, efficiency, client-centeredness, safety, accessibility, and equity of the NACS services in the context of HIV/AIDS care through team-driven, data-driven QI approaches
- Institutionalize the capacity to improve through competency development at the in-service and policy levels
- Conduct monitoring and evaluation activities

- Implement knowledge management activities to effectively and efficiently capture and disseminate learning about what improves outcomes

Scale of USAID ASSIST's Work in the Southern Africa Region



 HIV/AIDS and Nutrition



**South Africa DOH
MOH in Lesotho,
Mozambique & Botswana**



**3 out of 9 provinces in
South Africa (3 out of 52
district)**



**2 provinces in Mozambique
5 districts in Lesotho
TBD provinces in Botswana**

**12 Health facilities in South
Africa**

**10 sites in Lesotho
±10 sites in Botswana,
4 sites in Mozambique**



TBD QI teams

PROGRAM OVERVIEW

What are we trying to accomplish?	At what scale?
1. Conduct advocacy and planning for adoption of quality improvement methodology to integrate NACS services into HIV/AIDS care	
<ul style="list-style-type: none"> • Meetings with provincial and district leaders for buy-in to implement QI methodology integrate Nutrition Assessment Counselling and Support services into HIV/AIDS care • Identification of feeder facilities for site level support • Identification of district and facility key focal persons 	<ul style="list-style-type: none"> • South Africa: 2 provinces (Free State, KwaZulu Natal), 3 districts, 12 sites • Lesotho: 5 Districts (Maseru, Mofale's Hoek, Mafeteng, Leribe, Berea), 10 sites • Botswana: districts TBD, ±10sites • Mozambique: 2 provinces (Nampula and Tete), 4 sites
2. Conduct a situational analysis on the integration of NACS services into HIV/AIDS care	
<ul style="list-style-type: none"> • Adaptation of baseline assessment tool for NACS quality • Conduct baseline assessment at project sites to: <ul style="list-style-type: none"> ○ Identify bottlenecks and quality gaps ○ Estimate caseloads • Feedback sessions to Provincial M/DoH, district managers and facility operational managers 	<ul style="list-style-type: none"> • South Africa: 2 provinces (Free State, KwaZulu Natal), 3 districts, 12 sites • Lesotho: 5 Districts (Maseru, Mofale's Hoek, Mafeteng, Leribe, Berea), 10 sites • Botswana: districts TBD, ±10sites • Mozambique: 2 provinces (Nampula and Tete), 4 sites
3. Build capacity of Ministry/Department of Health staff and service delivery organizations in for NACS quality improvement	
<ul style="list-style-type: none"> • Develop quality improvement training materials for the integration of Nutrition Assessment, Counseling and Support services into HIV/AIDS care 	<ul style="list-style-type: none"> • South Africa: 2 provinces (Free State, KwaZulu Natal), 3 districts, 12 sites • Lesotho: 5 Districts (Maseru, Mofale's Hoek, Mafeteng, Leribe, Berea), 10 sites

What are we trying to accomplish?	At what scale?
<ul style="list-style-type: none"> Conduct training attached with mentoring, coaching and supportive supervision Procure and distribute mid-upper arm circumference (MUAC) measuring tapes 	<ul style="list-style-type: none"> Botswana: districts TBD, ±10sites Mozambique: 2 provinces (Nampula and Tete), 4 sites
4. Support development and implementation of facility-level quality improvement plans for the integration of NACS services into HIV/AIDS care	
<ul style="list-style-type: none"> Set up facility quality improvement teams Develop facility level QI plans Conduct coaching and supervision on the implementation of QI plans 	<ul style="list-style-type: none"> South Africa: 2 provinces (Free State, KwaZulu Natal), 3 districts, 12 sites Lesotho: 5 Districts (Maseru, Mohale's Hoek, Mafeteng, Leribe, Berea), 10 sites Botswana: districts TBD, +10sites Mozambique: 2 provinces (Nampula and Tete), 4 sites
5. Create demand for data and information use	
<ul style="list-style-type: none"> Conduct ongoing monitoring of program against set standards Empower provincial and district health units to monitor plans Support the development and utilization of a nutritional dashboard for decision making Engage in knowledge management and disseminate learning about what improves outcomes 	<ul style="list-style-type: none"> South Africa: 2 provinces (Free State, KwaZulu Natal), 3 districts, 12 sites Lesotho: 5 Districts (Maseru, Mohale's Hoek, Mafeteng, Leribe, Berea), 10 sites Botswana: districts TBD, +10sites Mozambique: 2 provinces (Nampula and Tete), 4 sites
Improvement Activity	Cross-cutting Activity

Activity 1. Conduct advocacy and planning for adoption of quality improvement methodology to integrate NACS services into HIV/AIDS care

OVERVIEW

Although the health sector plays a key role in the implementation and scale-up of nutrition-specific interventions, other sectors (e.g., agriculture, social development, and education) need to be part of nutrition-sensitive interventions to address the above-mentioned issues. In 2010, a Framework for Scaling up Nutrition was developed to re-position nutrition on the international agenda. Unfortunately, this framework has not cascaded down to reach all levels of care in the health system. Advocacy is therefore crucial to ensure that both management and implementers understand that nutrition is a cross-cutting priority service for all the clients served in the health care system in order to prevent and manage malnutrition. Since the success of any project lies in the buy-in from management, ASSIST is working to involve management from all levels including, Provincial Ministry/Department of Health, district managers, facility operational managers, and PEPFAR partner management to advocate for the acceleration of the prevention and management of severe and moderate malnutrition.

KEY ACCOMPLISHMENTS AND RESULTS

- ASSIST initiated discussions with the USAID missions and other key stakeholder in Lesotho, Mozambique and Botswana** (Botswana and Lesotho: Feb 2016 - present, Mozambique: Mar 2016 - present).

South Africa

- ASSIST held preliminary meetings with USAID and NDOH** (NDOH meetings Feb 15 - Mar 3, 2016 USAID meeting Mar 10, 2016). The meetings have provided strategic direction for the work in South Africa.
- ASSIST held preliminary meetings with the Free State DOH.** The meetings have provided strategic direction for work in the Free State Province (June 2 and 13, 2016).

- **ASSIST initiated discussions with the KwaZulu-Natal (KZN) DOH on collaboration on the nutrition work in the province** (May 2016).
- **ASSIST held preliminary meetings with the district leaders of Lejweleputswa and Fezile Dabi Districts, Free State DOH** (July 15, 25, 2016). During the meetings, approval from district leaders was received and dates for baseline assessments was set).
- **ASSIST held preliminary meetings with the KZN DOH** (July 12, 2016). The meetings have provided strategic direction for work in the KZN Province.
- **ASSIST held preliminary meetings with the district leaders of Ugu Districts KZN DOH** (September 19, 2016). During meetings approval from district leaders was received and dates for baseline assessments was set.

Botswana

- **ASSIST conducted a country and site visit to Botswana** to meet with the USAID Mission, stakeholders (Ministry of Health, UNICEF, etc.), and the ASSIST Botswana team to introduce the nutrition work (April 24-26, 2016).

Lesotho

- **ASSIST conducted a country and site visit to Lesotho** to meet with the USAID Mission, stakeholders (Ministry of Health, EGPAF, etc.), and ASSIST Lesotho to introduce the nutrition work (May 3-5, May 12, 2016).
- **Follow-up country visit to Lesotho was conducted** to meet with the USAID Mission, EGPAF, M2M, and ASSIST Lesotho to further discuss collaboration on the nutrition QI work (June 29 – July 1, 2016).
- **Based on USAID suggestion, 10 sites (across 5 districts) were selected where EGPAF and M2M are working to complement the work with QI support.**
- **Conducted follow-up country visit to Lesotho** (June 29 – July 1, 2016) to meet with the USAID Mission, EGPAF, M2M, and ASSIST Lesotho to further discuss collaborations on the Regional Nutrition QI work.

Mozambique

- **ASSIST conducted a country visit to Mozambique** to meet with the USAID Mission, Ministry of Health, and FANTA to introduce the nutrition work (June 14-15, 2016).

Activity 2. Conduct a situational analysis on the integration of NACS services into HIV/AIDS care

OVERVIEW

ASSIST is collaborating with the Ministries and the Department of Health in each country to conduct baseline assessments of all selected sites to identify quality gaps and bottlenecks that can be addressed through quality improvement.

KEY ACCOMPLISHMENTS AND RESULTS

- **ASSIST adapted a baseline assessment tool for continuous QI, based on ASSIST's work in NACS** (March 2016).
- **ASSIST conducted, in collaboration with the Provincial DOH, a baseline assessment in selected sites in Free State and KZN provinces in South Africa** (Aug-Sept 2016).
- **ASSIST conducted baseline assessments in 5 facilities in Lesotho (Maseru, Leribe and Berea districts)** (July 19-23, 2016) and in 8 sites in Free State Province (Lejweleputswa District (Aug 15-18, 2016) and Fezile Dabi district (Aug 22-24, 2016), and four sites in KZN Province in Ugu District (Sept 28-30, 2016). The baseline assessments reviewed and analyzed 8 areas related to NACS: 1) Staff trained in NACS; 2) Integration of nutrition into services; 3) Availability of materials and equipment; 4) Nutrition assessment classification; 5) Counseling procedures; 6) Food supplements; 7) Referral and follow-up; and 8) Data recording across services provided for children under the age of 5 years in the 5 selected facilities.

- **Table 2** shows baseline results of selected nutrition data for children under 5 years from 5 sites across 3 districts in Lesotho for June 2016. The table shows that not all children under 5 years who come to the facilities are nutritionally assessed and classified and therefore some children who might be malnourished might not be identified. Another gap illustrated by the data is that not all children who are identified to be malnourished are linked to nutrition support for treatment. It is important to note that some facilities did not have access to nutrition supplements for the treatment of malnutrition.

Table 2. Lesotho: Baseline assessments on selected nutrition data for children under 5 years of age, 5 facilities (June 2016)

Facility	Number of children <5 yrs (June 2016)	Weight for Height >-2SD	Weight for Height <-2SD	Number of children under 5 yrs. enrolled in malnutrition treatment	Number of children under 5 yrs. enrolled in supplementary feeding
St Joseph's PHC	618	521	21	0	-19
Mamohau Hospital MCH Clinic	56	44	0	0	0
Maluti Hospital MCH Clinic	121	162	9	0	0
Berea Hospital MCH Clinic	556	503	6	10	0
Berea Hospital ADHC	89	103	1	1	0
Scott Hospital MCH Clinic	697	17	2	19	0

Note: No facilities had RUTF in stock; Berea and St Joseph's Hospitals had stock of WFP Supplementary feeds; Scott and St Joseph's Hospitals had no RUTF in stock

- **Table 3** shows baseline results of the compliance to nutrition assessment and classification procedures in seven sites of Free State Province. **Table 4** shows baseline results of the nutrition assessment and classification procedures in three sites in KZN Province. For each age group shown there are a set of nutrition care standards as outlined in the National Guidelines on Nutrition Counseling, Support, and Treatment for Malnourished Individuals. As shown in the tables, it is clear that there is better compliance to provincial nutrition care standards among infants and children when compared to adolescents, adults, and pregnant and breastfeeding women.

Table 3. South Africa: Baseline on Compliance with Nutrition Assessment and Classification Procedures, 7 facilities, Free State Province (Sept 2016)

Age Groups	Facilities						
	Bophelong Clinic	PAX CHC	Sedibeng Sa Bophelo	Thabong Clinic	Chief Albert Luthuli	Tshepong Clinic	Bongani Hospital
Infants and children (0-59 months)	3/10	5/10	9/10	2/10	3/10	3/10	9/10
Adolescents (5-19 years)	1/5	Not observed	Not observed	Not observed	Not observed	Not observed	Not observed
Adults (non-pregnant and non-breastfeeding (> 19 years))	1/5	5/5	3/5	Not observed	1/5	Not observed	Not observed
Pregnant and breastfeeding women up to 6 months postpartum	5/5	Not observed	Not observed	Not observed	Not observed	Not observed	Not observed

Key	<60%	60-90%	>90%
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Table 4. South Africa: Compliance with Nutrition Assessment and Classification Procedures, 3 facilities, Ugu District, KZN Province (Sept 2016)

Age Group	Facilities		
	Gcilima Clinic	Bhobhoyi Clinic	Izingolweni Clinic
Infants and Children (0-59 months)	6/10	9/10	8/10
Adolescents (5-19 years)	Not observed	5/5	1/5
Adults non pregnant and non-breastfeeding (> 19 years)	Not observed	5/5	1/5
Pregnant and breastfeeding women up to 6 months postpartum	5/5	Not observed	Not observed

Key	<60%	60-90%	>90%
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- As part of the baseline assessments, random patient records are audited for completeness and compliance to nutrition care standards. **Table 5** and **Table 6** show child health (0 – 59 months) records audited in Free State and KZN provinces. There clearly seems to be a difference in compliance between the two provinces. One explanation that could be given for the difference is the presence of a specialized cadre of health care workers and nutrition advisors in the KZN Province. The nutrition advisors are placed in all health facilities and in charge of nutrition care services in facilities particularly focusing on services to children under the age of 5 years.

Table 5. South Africa: Compliance with child health record completion, 7 facilities, Free State Province (Aug 2016)

	Facilities						
	Thabong	Albert Luthuli CHC	Tshepong	Bongani Hospital	Bophelong	Sedibeng	PAX CHC
Weight for Age (WFA)	9/9	8/8	10/10	6/10	10/10	10/10	7/7
Weight for Length / Height (WFLH)	0/7	1/5	0/7	1/4	0/7	4/10	0/6
Length / Height for Age (LHFA)	1/9	1/5	0/7	0/4	1/7	4/10	0/6
MUAC	0/7	4/5	0/7	1/4	0/7	4/10	5/6
Results Interpreted	0/9	6/8	0/7	1/4	1/7	0/10	0/6
Appropriate action taken	0/9	0/8	0/10	2/10	0/10	0/10	0/7
Key	<60%		60-90%		>90%		

Table 6. South Africa: Compliance with child health record completion, 4 facilities, Ugu District, KZN Province (Sept 2016)

	Facilities			
	Gcilima Clinic	Bhobhoyi Clinic	Izingolweni Clinic	Murchison Hospital
Weight for Age (WFA)	6/10	6/10	9/10	10/10
Weight for Length / Height (WFLH)	7/10	3/10	2/10	4/10
Length / Height for Age (LHFA)	6/10	5/10	4/10	3/10
MUAC	6/10	5/10	3/10	6/10
Results Interpreted	6/10	4/10	0/10	10/10
Appropriate action taken	6/10	5/10	0/10	0/10
Key	<60%	60-90%		>90%

0 indicate currently not assessed in facilities; we expect to see future improvement in nutrition assessments implemented

N/A indicate no patients available on the day of baseline visit, to do clinic visit on the specified relevant days (Boitumelo Hospital on Wednesdays for POPD and Thursdays for Ante-Natal Care)

WFLH and LHFA is only for children age from 6 months old and above; we will change record review not to combine with under 6months but to review RTHB separate for 6-60 months old

- **ASSIST is in communication with the provincial MOH and country USAID missions to conduct baseline assessments in selected sites in Lesotho and Mozambique (dates to be confirmed).**

Activity 3. Build capacity of Ministry/Department of Health staff and service delivery organizations in NACS quality improvement

OVERVIEW

Capacity building is more than just training. Despite this, the most common intervention done to fill quality gaps is training. Knowledge alone does not necessarily translate into practice. Capacity building includes investing time and money in creating an enabling environment by influencing guiding policies and frameworks. This involves equipping people with the right skills and tools to implement the knowledge learned in training. To institutionalize continuous quality improvement (CQI), training should be followed up by mentoring, coaching, and supportive supervision. In 2014 the FHI360 Nutrition Assessment Counselling and Support Capacity Building Project identified the need for a deliberate and concerted effort towards CQI to strengthen nutrition integration into existing health services. One of the important areas still requiring specific attention is the need to develop and provide comprehensive and consistent CQI capacity building/ training for site level staff. In FY16-17, ASSIST is developing CQI training materials for the prevention and management of severe acute malnutrition and moderate acute malnutrition. The materials will be used to train and mentor health care providers in the selected sites. We expect that strengthening the implementation and maintaining quality in the NACS program will enable us to see a reduction in the prevalence of severe and moderate acute malnutrition and subsequent case fatality rates.

KEY ACCOMPLISHMENTS AND RESULTS

- **Finalized QI training package for SAM/MAM** incorporating elements of the NACS training package (Sept 2016).
- **Training dates set for trainings in South Africa:** Oct 10-14, 2016 in Free State Province and Oct 17-21, 2016 in KZN Province.

Activity 4. Support development and implementation of facility-level quality improvement plans for the integration of NACS into HIV/AIDS care

Activity 5. Create demand for data and information use

OVERVIEW

Following training and capacity building on QI methodology in NACS integration in to HIV/AIDS care services there is a need for mentoring, coaching and supportive supervision at site level to ensure that the learned skills from the training are translated into practice in day-to-day service delivery and that sites and district and provincial health unit monitor results against standards and plans. The first step would be to establish a facility quality improvement team comprised of individuals that has received both NACS and QI methodology trainings. It is crucial that the team is selected by the facility operational manager to ensure buy in and ownership of the initiative. Once a team is selected the process of choosing improvement priorities can commence. Each facility will develop a QI package with guidance from ASSIST, MOH/DOH, and PEPFAR IP. The QI package will be refined and scaled up through a series of onsite supportive supervision visits. Peer-to-peer learning will be supported to spread what works to improve outcomes.

KEY ACCOMPLISHMENTS AND RESULTS

- Due to delays in work plan revision and approval, activities 4 and 5 will not start until FY17.

GENDER INTEGRATION

The baseline assessments for South Africa and Lesotho did not disaggregate data by sex. If possible, the Botswana and Mozambique baseline assessments will disaggregate child nutrition data by sex, to allow for the analysis of sex-disaggregated data to identify gender-related gaps and issues.

SUSTAINABILITY AND INSTITUTIONALIZATION

ASSIST is working to build the capacity of the provincial and district DOH/MOH leadership on integration of NACS into HIV/AIDS care services. It is anticipated that this integration will likely result in improvement in SAM and MAM prevention and management. Additionally, the project will assist the

leadership to use knowledge for action and decision making through the QI methodology. Through this work, ASSIST is also supporting the implementation in South Africa of the DOH's National Implementation Framework for the Integrated Management of Children with Acute Malnutrition in South Africa. The national government is advocating for provincial and district DOH as well as facilities to develop MAM and SAM implementation plans in line with the country national plan. ASSIST's work with facilities in South Africa will directly contribute to the development and institutionalization of such implementation plans.

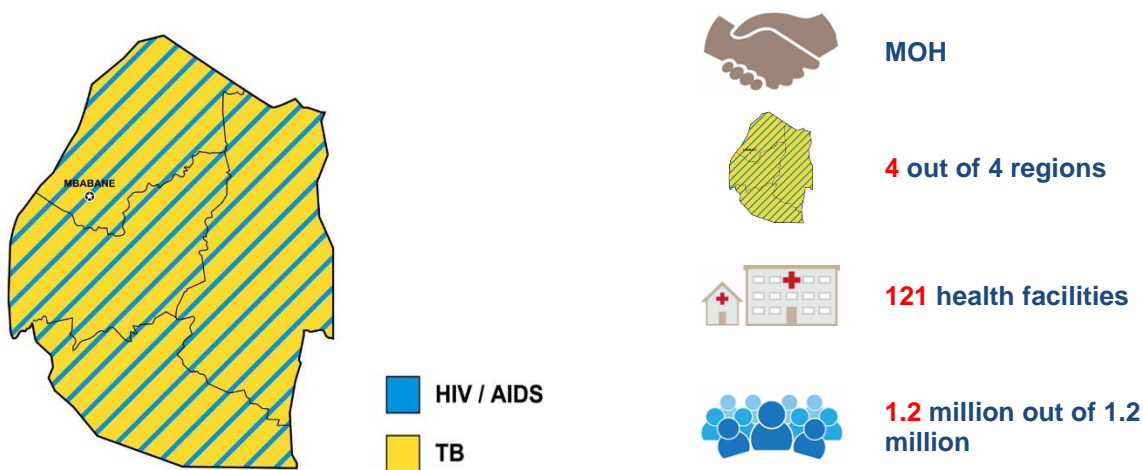
SWAZILAND

BACKGROUND

Swaziland is one of the countries with the highest HIV prevalence in the world with 31% of 18–49 year olds living with HIV (SHIMS, 2011). Women are disproportionately affected, with a prevalence of 38% compared to 23% in men (SHIMS, 2011). Tuberculosis is also a major public health problem currently confronting Swaziland. Swaziland has one of the highest TB incidence rates in the world at 733/100,000 population (69/100,000 for MDR-TB). About 8% and 36% of the new and previously treated TB patients have MDR-TB TB and yet only 60% of the MDR/RR TB patients are initiated on treatment. Treatment success stands at 78% among the susceptible TB cases and 60% among the MDR-TB cases.

In FY16, ASSIST Swaziland worked on three activities, to improve Option B+/ART laboratory-related care and treatment monitoring, in-service training, and quality in the National VMMC program. Details and background on each activity are provided below.


Scale of USAID ASSIST's Work in Swaziland



PROGRAM OVERVIEW

What are we trying to accomplish?	At what scale?
1. Improve Option B+/ART laboratory-related care and treatment monitoring	
<ul style="list-style-type: none"> Strengthen National Sample Transport System 	<ul style="list-style-type: none"> National: 121 health facilities
<ul style="list-style-type: none"> Establish mHealth options patient feedback system to ensure they return to the facility once laboratory results are available 	<ul style="list-style-type: none"> National: 15 clinics
<ul style="list-style-type: none"> Strengthen screening for active tuberculosis in pregnant and lactating mothers Swaziland 	<ul style="list-style-type: none"> National: 3 facilities
<ul style="list-style-type: none"> Conduct an evaluation on the implementation of TB/HIV collaborative activities in Swaziland 	<ul style="list-style-type: none"> National: 11 facilities

What are we trying to accomplish?	At what scale?
<ul style="list-style-type: none"> Conduct a research on using the TB LAM test among persons living with HIV (PLHIV) 	<ul style="list-style-type: none"> National: 3 facilities
2. In-service training	
<ul style="list-style-type: none"> Assess HRH capacity to deliver HIV/AIDS services required for epidemic control and achieve the 90-90-90 by 2020 HIV targets 	<ul style="list-style-type: none"> National: covering nurses and doctors
<ul style="list-style-type: none"> Provide technical assistance, technical expertise, and consultations to improve effectiveness of IST 	<ul style="list-style-type: none"> Regional PEPFAR clinical partners
<ul style="list-style-type: none"> Conduct systematic training needs assessment of priority lay cadres involved in HIV care (facility and community expert clients, lay counselors and data clerks) and utilize findings to improve training delivery for lay cadres 	<ul style="list-style-type: none"> National among high and moderate volume sites Community and facility expert clients, data clerks, lay counsellors
<ul style="list-style-type: none"> Establish collaborations with at least one local training institution and provide direct technical support for development of IST training curricula for lay cadres 	<ul style="list-style-type: none"> One training institution
<ul style="list-style-type: none"> Provide direct technical assistance to the MOH training unit and the MoPs training department 	<ul style="list-style-type: none"> All MOH programs nationally, training providers, MOH training unit, facility IST coordinators and committees
3. Improve quality of services in the national VMMC program through strengthening national QA/QI/CQI oversight and support for the program	
<ul style="list-style-type: none"> Conduct VMMC CQI baseline assessments 	<ul style="list-style-type: none"> National: 5 health facilities
<ul style="list-style-type: none"> Conduct QA/CQI Training 	<ul style="list-style-type: none"> National: MOH and partner staff – 20
<ul style="list-style-type: none"> Provide appropriate QA/QI/CQI equipment, training, and support to the national office to develop a quality management database 	<ul style="list-style-type: none"> National: Strengthen data management system
<ul style="list-style-type: none"> Provide Technical assistance to the National VMMC team to strengthen CQI assessment, coaching and oversight 	<ul style="list-style-type: none"> CQI visits and quarterly CQI assessment of 5 facilities
<ul style="list-style-type: none"> Provision honorium support Senior National VMMC office 	<ul style="list-style-type: none"> National VMMC manager to create sustainability

 Cross-cutting Activity

Activity 1. Improve Option B+/ART laboratory related care and treatment monitoring

1a. Strengthen the National Sample Transport System to improve sample transportation for viral load testing among HIV infected pregnant women.

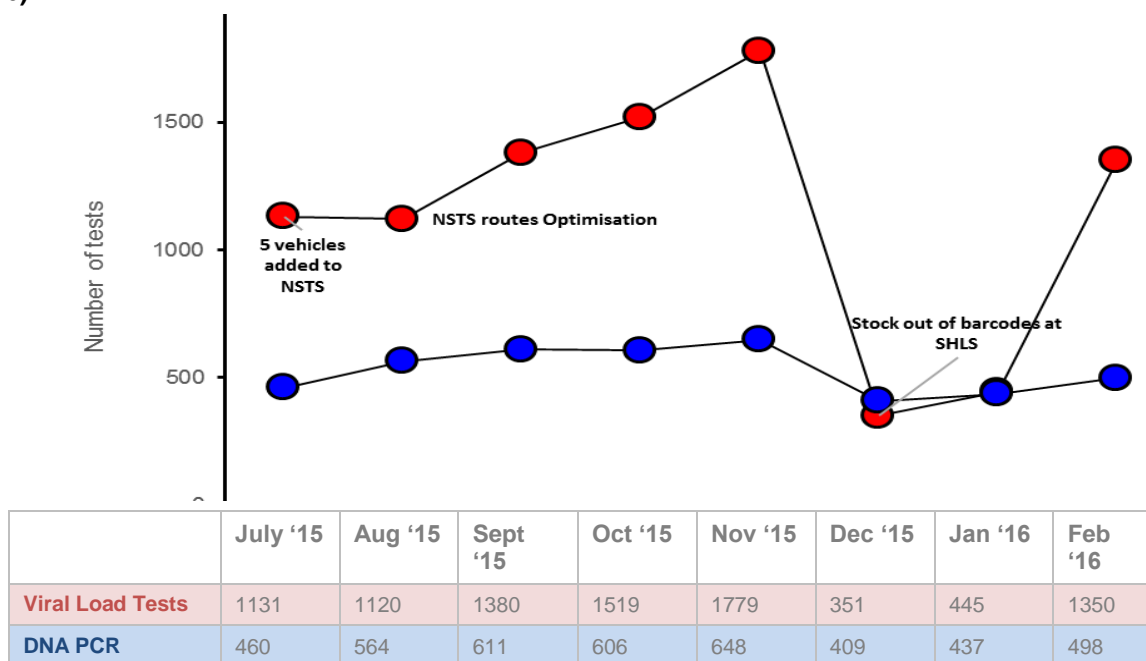
OVERVIEW

The revision of the PMTCT guidelines in Swaziland to align with WHO 2013 PMTCT recommendations meant that all pregnant women be initiated on ART regardless of their CD4 cell counts (Option B). In FY15, ASSIST began to support the National Sample Transport System to improve Option B+/ART laboratory related care and treatment monitoring. In FY16, ASSIST provided support to increase the capacity of the NSTS to service peripheral clinics more regularly and frequently to ensure specimen transportation for viral load testing for the clients.

KEY ACCOMPLISHMENTS AND RESULTS

- Provided support to increase the capacity of the NSTS to service peripheral clinics more regularly and frequently to ensure specimen transportation for viral load testing.** In June 2015, five vehicles were procured and modified to transport blood specimens safely. The vehicles were handed over to the MOH in July 2015. **Figure 58** shows the increasing volumes of samples for viral load testing collected from the three regions (Lubombo, Hhohho and Manzini) from July 2015 to Feb 2016, due to the additional vehicles added to NSTS.

Figure 58. Swaziland: Trends in viral load and DNA PCR tests conducted (July 2015 – Feb 2016)



- Procured and distributed refrigerators to improve specimen storage for viral load testing at facilities providing Life Long Antiretroviral Therapy for Pregnant and Lactating Women (LLAPLa) (June 2016).** Ten facilities in the Lubombo region were found to need the equipment to enable them provide a comprehensive service for HIV care and treatment. This is contributing to improving laboratory related clinical support systems for the roll-out of LLAPLa.

1b. Establish mHealth platform to improve viral load results delivery for HIV-infected pregnant women

OVERVIEW

The mHealth project started in FY16 aims to improve results delivery and retain HIV-infected mothers and their babies in care. The roll-out of Option B+ for all pregnant HIV infected women to help eliminate mother-to-child transmission of HIV has necessitated that all pregnant women on ART be monitored to ensure viral load suppression. With strengthening of the NSTS to deliver samples for viral load testing, it was important that the results are delivered in a timely manner to improve treatment monitoring. Our mHealth platform delivers results to the clinics, informs the patient about available results, and reminds the patient of scheduled appointments. The platform also links the infant to the mother and reminds the healthcare worker to retest both if they are eligible for retesting for HIV. The platform is being rolled out in phases, with 15 clinics using the platform in the first phase. The availability of a functional contextualized mHealth platform enabling real time notification and retrieval of viral load test results from a centralized testing laboratory to peripheral and hard to reach clinics is of critical importance for timely patient management and follow up. GSM signal can provide a cheaper and more practical alternative to augment network connectivity where conventional network infrastructure is not available.

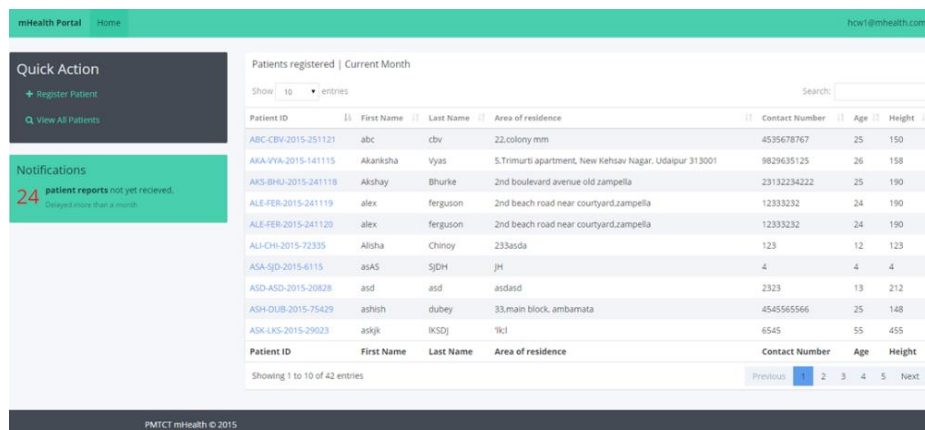
KEY ACCOMPLISHMENTS AND RESULTS

- Developed and tested the interface for capturing details of pregnant mothers when they come for testing and recording their results and appointment (Oct – Dec 2015). A consultant software developer created the mHealth application (see Figure 59 and Figure 60) and the ASSIST mHealth project team tested it.

Figure 59. Swaziland:
Sample of text message received by test patient from the mHealth app



Figure 60. Swaziland: Interface for the mHealth application



- Chose 15 sites in three regions, conducted site readiness assessments, procured hardware (desktop computers), and developed a software installation and training schedule for the facility-based health care workers (Jan – Feb 2016).
- Tested system on 15 subjects, who received SMSs reminding them of clinic appointments as well as availability of their laboratory results in the clinic (Mar 2016).
- Collected baseline data (Mar 2016). See Table 7.

Table 7. Swaziland: Baseline data for PMTCT indicators and values of the mHealth application (Sept 2015 – Mar 2016)

Indicator	Data source (for verification /validation of report from mHealth server)	Sept 2015 (Baseline)	Mar 2016 (Baseline)
# of HIV+ pregnant and lactating women who are registered in care	<ul style="list-style-type: none"> ANC register PNC register HTC tally sheet 	906	3413
# of HIV+ pregnant and lactating women who are initiated on ART	<ul style="list-style-type: none"> ANC register ART register 	136	535
# HIV+ pregnant and lactating women who had a viral load test done and received their results within the reporting period	<ul style="list-style-type: none"> Lab log book at facility ANC register 	57	304
# pregnant and lactating women who were retested for HIV during care in the reporting period	<ul style="list-style-type: none"> ANC register PNC register HTC tally sheet 	517	2169
# exposed babies who had an EID between 6-8 weeks	<ul style="list-style-type: none"> DBS log book at facility 	207	1091
# exposed babies who had EID between 6-8 weeks and received their results	<ul style="list-style-type: none"> DBS log book at facility 	168	812
# exposed babies who were retested between 12 and 24 months (rapid test)	<ul style="list-style-type: none"> CWC register 	4	38

- **Finalized the development and testing of the mHealth platform for HIV+ pregnant women, lactating mothers and their babies to inform patients about viral load and DBS results from the laboratory** (Apr 2016). The mHealth platform enables real time notification and retrieval of viral load test results from a centralized testing laboratory to peripheral and hard to reach clinics is of critical importance for timely patient management and follow up.
- **Presented the mHealth system to the Viral Load Roll-out TWG** (May 2016). It was well received and recommended for scale-up and adoption for other conditions and laboratory results.
- **Resolved laboratory configuration issues** (Aug 2016). The Laboratory Information System (LIS) vendor rolled out an upgrade which changed the functionality of the LIS. This was done by changing the way in which lab results were named (e.g., previously instead of choosing a unique identifier, the LIS used the patient's name and was therefore generating multiple reports for one patient since in Swaziland, many people share the same name -- making it impossible to match lab results generated with patients captured in the mHealth system. This stalled the implementation of the mHealth system to facilities. ASSIST engaged the Swaziland Health Laboratory Service, Association of Public Health Laboratories (partner supporting the implementation of the LIS in Swaziland) and Laboratory System Technologies (vendor implementing LIS in Swaziland) to revert to naming the lab results using the unique identifier.
- **Installed the mHealth system in three sites** (Sept 2016). The project team installed the system and trained staff members at three facilities on using the application. Retrospective data entry is ongoing and patient appointments have been entered into the system.

1c. Conduct operational research for TB screening among pregnant women

OVERVIEW

The Screening in Maternity to Ascertain TB Status (SMATS) Study, conducted by ASSIST in collaboration with the MOH, evaluated the sensitivity and specificity of the current TB screening tool for pregnant and lactating women (both HIV-infected and not) as well as the additional benefits of adding screening diagnostics like the interferon-gamma release assay (IGRA) and a chest x-ray. This cross-sectional analytical study involved pregnant and lactating women attending antenatal or postnatal care, respectively, at three facilities. Data were collected from all participants who agreed to take part in the study, regardless of results of the four-symptom screening. It is anticipated that this study will assist in identifying the most sensitive screening algorithm for pregnant and lactating women that maximizes the number of true cases detected to facilitate timely diagnosis and initiation of TB treatment. This, in turn, will help to improve maternal and child health outcomes in Swaziland.

ACCOMPLISHMENTS AND RESULTS

- **Data collected in 11 facilities (clinics, health centers, and hospitals)** (Aug 2015 – Mar 2016).
- **Recruited 990 study participants** (Aug 2015 – Mar 2016). The study reached the minimum required sample.
- **Data collection, cleaning, and analysis completed** (July – Sept 2016). Report writing is ongoing, and the dissemination of the results is planned for November 2016.

1d. Evaluation of TB-HIV collaborative improvement activities in Swaziland

OVERVIEW

There were two main components to this evaluation: a retrospective quantitative review and data abstraction from TB and HIV facility data sources, and a TB infection control evaluation involving completion of a facility assessment tool and health care worker knowledge, attitudes, and practices (KAP) survey. Data collection was conducted from Aug to Oct 2015. The evaluation was conducted in 11 TB and HIV care and treatment sites. The sites were purposefully selected to ensure representation of all four regions of Swaziland and all facility types (hospitals, health centers and clinics). Sites were required to have provided both TB and HIV services and been operational at least one year prior to study initiation, with enough patients to achieve sample size.

A cohort sampling strategy was used to assess the intensified case finding (ICF) cascade and ART uptake. For the ICF cascade assessment, HIV care and treatment facility records were retrospectively

examined to identify a cohort of eligible patients for data abstraction. Patients were considered eligible for inclusion if they were at or older than 15 years, seen at a select site July – Nov 2014, and not diagnosed with TB within the twelve months preceding the beginning of the study. For the ART assessment, TB facility records were retrospectively examined to identify a cohort of eligible patients aged ≥ 15 years, seen during and retained by the end of Nov 2014, and with an unknown or positive HIV status.

ACCOMPLISHMENTS AND RESULTS

- Completed data analysis (Jan 2016).** 2,058 PLHIV were included in this evaluation for ICF. Of these, 45.6% were male, 54.2% were female. Nineteen percent (19%) of PLHIV received their care at a clinic, 34% at a health center, and 46.5% at a hospital. The cascade showed that about half of the people with a positive TB screen received a diagnostic evaluation, however 70% of those who had a diagnostic evaluation were found to have a positive TB diagnosis, and 82% went on to initiate appropriate TB treatment (**Figure 61**). The study revealed that more women than men access care. However, once on treatment, especially anti-TB treatment, more men than women achieve treatment success; with more women failing or defaulting treatment (**Figure 62**). This information will be used to design interventions that strengthen the implementation of TB/HIV collaborative activities.

Figure 61. Swaziland: Cascade results of TB/HIV collaborative activities, 11 HIV clinics (July – Nov 2014)

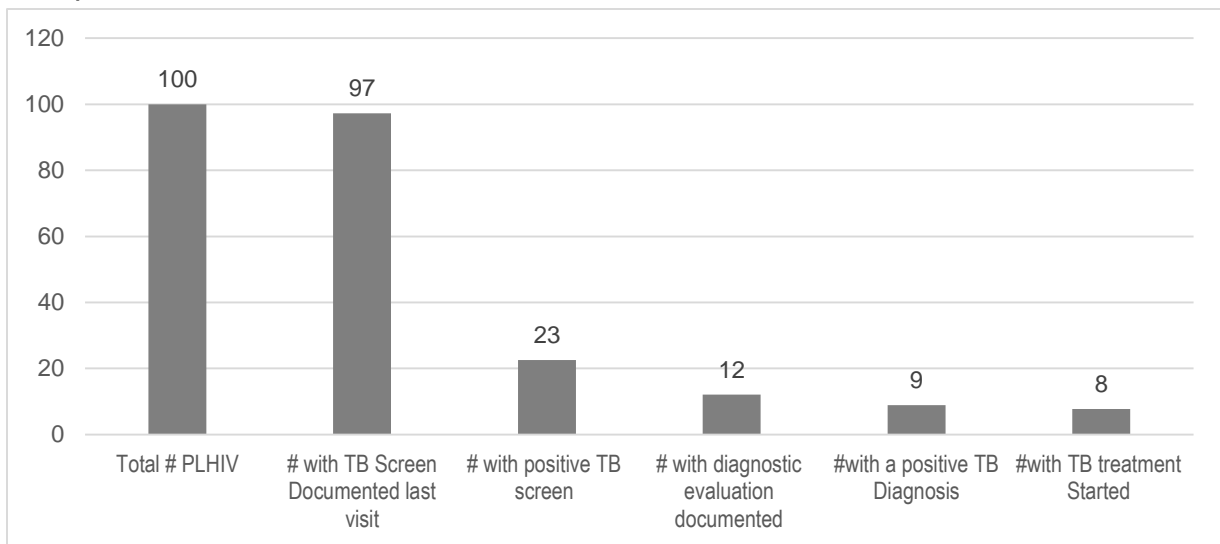
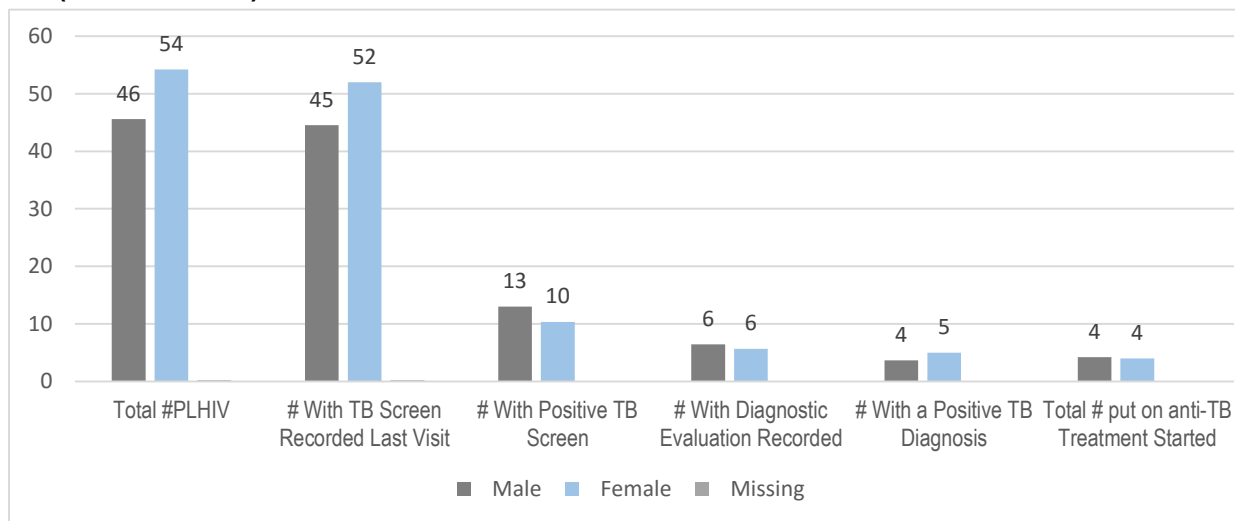


Figure 62. Swaziland: Cascade results of TB/HIV collaborative activities disaggregated by gender (Jul – Nov 2014)



- Finalized the evaluation of the implementation of TB/HIV collaborative activities to identify key performance areas that the HIV and TB programs need to improve (Apr – Jun 2016).** In the baseline assessment evaluating TB infection control knowledge, attitudes, and practices of health care workers at each of the selected facilities:
 - 2,058 records were reviewed for the ICF cascade, and 466 for ART provision. Forty-three (43) health care workers participated in the KAP TB infection control assessment. TB screening was excellent.
 - 97% of chronic care patients had documented TB screening at their last visit. However, of those screening positive for TB, 46% did not have documented TB diagnostic test. Of those that were evaluated only 64% were diagnosed TB.
 - IPT uptake was also found to be very low at 7% among those eligible.
 - CD4 count at TB treatment initiation was not documented in almost a quarter (24%) of patients, which may be a reflection of the national guideline recommendations, which emphasize that HCWs should not to wait for receipt of CD4 count results when initiating ART.
 - Almost 90% of TB patients were initiated on ART within two months of starting TB treatment.
 - Overall, 85% of co-infected patients in this cohort were documented to have achieved TB treatment success (33% completed and 52% cured).
- Disseminated the results of the TB/HIV evaluation (July – Sept 2016).** The report was finalized and printed. This report was disseminated by the Swaziland National AIDS Program and The National TB Control Program. (see: <https://www.usaidassist.org/resources/evaluation-tbhiv-collaborative-activities-swaziland>)

1e. Conduct research on using the TB LAM test among PLHIV

OVERVIEW

This study, conducted by UNAIDS and ASSIST in collaboration with the Swaziland MOH, evaluated the incremental utility of the TB mycobacterial lipoarabinomannan (LAM) antigen test as an added tool to intensified case finding for TB in PLHIV due to its advantages such as easy handling procedures of less infectious specimen, less sophisticated and affordable laboratory instruments required, and quick results turnaround (within 25 minutes). It also aimed to evaluate utility and issues surrounding nationwide-scale implementation of Urine TB LAM test when used in conjunction with the TB symptom-screening tool. We targeted consecutive HIV positive patients attending the ART clinics at Mbabane, Hlatikulu Government Hospitals and Raleigh Fitkin Memorial Hospital, for treatment and care (Apr to Sept 2015). Purposive sampling methods were used for this study. All HIV positive adults (ages 18 years and above) who were patients attending the HIV care centers were eligible for enrollment in the study, regardless of their ART status, as long as they had no current TB diagnosis

and were not previously initiated/enrolled for IPT for the past two months of the data collection period.

ACCOMPLISHMENT AND RESULTS

- **Received all laboratory results from Swaziland Health Laboratory Services** (Dec 2015).
- **Conducted data analysis** (Feb 2016).
- **Finalized evaluation** (May 2016). Key findings by objectives are listed in **Table 8** and include:
 - The TB LAM test was able to diagnose 1 out of 4 patients that would have been missed out when using the Xpert MTB and conventional sputum culture because they were unable to spontaneously produce a sputum. The sample size was 417.
 - The proportion of reported signs and symptoms were: cough 99.5%; night sweats, fever and weight loss (84.4%, 79.6% and 66.7% respectively). The sensitivity of the cough symptom was 100% whether or not the duration was greater than two weeks or any duration. However, specificity was very low; 0.3% (95% CI: 0.0-1.7) for a cough of any duration and still very low at 0.65% (95% CI: 0.0-3.5) for a cough of more than 2 weeks. Except for weight loss (sensitivity 68.4% [95% CI: 51.3-82.5]), cough, night sweats and fever each had a sensitivity greater than 90%. However, all had specificities that were less than 35%.
 - True positive TB LAM test was significantly affected by ART status and CD4 cell count. However, after controlling for age, gender, CD4 cell count and ART status, only CD4 cell count <100 (reference to CD4 cell count ≥100) remained a significant predictor of true positive TB LAM. The odds ratio of having true TB LAM positivity was 43.57 (95% CI: 4.97-381.86; p-value < 0.01) if CD4 cell count was <100 cells/mm³ when compared to those with CD4 cell counts above 100 cells/mm³.
 - The sensitivity of TB LAM increased as the CD 4 cell count decreased: 55.6% (95% CI: 21.2-86.3) and a specificity of 90.9% (95% CI: 75.7-98.1) among those who had CD4 cell count less than 100 cells/mm³ compared to 20% (95% CI: 7.7-38.6) and 96.4% (95% CI: 93.8-98.1) respectively, for the overall study population. The sensitivity and specificity of Xpert MTB/RIF results was 77.8% (95% CI: 40.0-97.2) and 100% (95% CI: 89.4-100) among those who had CD4 cell count less than 100 cells/mm³.

Table 8. Swaziland: Sensitivity and specificity analysis for both TB LAM and Xpert MTB/RIF tests against the conventional sputum culture

CD4 category	TB LAM % (CI)				Xpert MTB/RIF % (CI)			
	<100	100-200	≥200	Overall	<100	100-200	≥200	Overall
Sensitivity	55.6% (21.2-86.3)	16.7% (0.4-64.1)	0.0% (0-21.8)	20% (7.7-38.6)	77.8% (40.0-97.2)	66.7% (22.3-95.7)	22.7% (7.8-55.1)	50% (31.3-68.7)
Specificity	90.9% (75.7-98.1)	97.3% (85.8-99.9)	97.0% (94.2-98.7)	96.4% (93.8-98.1)	100% (89.4-100)	100% (90.5-100)	99.6% (97.9-100)	99.7% (98.3-100)
PPV	62.5% (24.5-91.5)	50.0% (1.26-98.7)	0.0% (0-36.9)	33.3% (13.3-59)	100% (59-100)	100% (39.8-100)	80.0% (28.4-99.5)	93.8% (69.8-99.8)
NPV	88.2% (72.5-96.7)	87.8% (73.8-95.9)	92.3% (88.5-95.2)	94.5% (93.8-98.1)	94.3% (80.8-99.3)	94.9% (82.7-99.4)	96.0% (93-98.4)	95.7% (93.0-97.6)
ROC	0.73	0.57	0.49	0.49	0.89	0.83	0.63	0.75

- **Using the evidence from this study, the following recommendations to improve TB diagnosis and case detection are made:**
 - TB LAM can be used in severely immunocompromised patients with CD4 cell count <100 to aid the diagnosis of TB (the sensitivity and specificity of TB LAM is 55.6% and 90.9% in patients with CD4 cell count <100, without targeted selection of patients in this study).

- Targeting the correct population, TB LAM may have a limited value in aiding the detection of TB in patients unable to produce sputum (the probability of confirming additional TB cases using TB LAM among those without sputum who would have otherwise been missed is 1.8% without proper patient targeting).
 - Using one sample for Xpert MTB/RIF testing is not sufficient to guarantee accurate ruling out of TB disease. Therefore at least two samples for each patient should be send for Xpert MTB/RIF (the sensitivity of Xpert MTB/RIF is 50% and specificity is 99.5% using one sample).
 - Culture should be prioritized for all presumptive patients who test negative for Xpert MTB/RIF, specifically those PLHIV with CD4 cell count ≥ 200 cells/mm³ (generally 50% of those who actually had TB were negative on Xpert MTB/RIF and specifically 73% of those with CD4 cell count ≥ 200 cells/mm³ who had TB were missed negative on Xpert MTB/RIF).
 - The study evaluated incremental utility of the TB LAM test as an added tool to intensified case finding for TB in PLHIV due to its advantages such as easy handling procedures of less infectious specimen, less sophisticated and affordable laboratory instruments required, and quick results turnaround time within 25 minutes.
- **Disseminated report** (July – Sept 2016).

Activity 2. In-service training

In January 2014, the MOH training office and ASSIST initiated an in-service training (IST) improvement project to improve the effectiveness, efficiency, and sustainability of IST systems in the MOH in Swaziland in the face of the HIV epidemic. The project is based on the USAID Global Framework for Health Worker IST Improvement. This activity's ultimate goals are to strengthen the capacity of the MOH training unit to coordinate IST in the country, institutionalize sustainable models for IST coordination, and improve the quality, efficiency and effectiveness of IST for health workers through enhanced design, delivery, coordination, and tracking of all in-service training, as well as improve linkages with pre-service training.

2a. Assess HRH capacity to deliver HIV/AIDS services required for epidemic control and achieve the 90-90-90 by 2020 HIV targets

OVERVIEW

This activity is led by the regional health management team (RHMT) and the MOH training unit at MOH headquarters. It aims at identifying the health care workers that need to be trained in order to offer quality and safe HIV services according to the national guidelines. This will inform a competence based training plan, strategy and allocation of training resources appropriately.

KEY ACCOMPLISHMENTS AND RESULTS

- **Developed a training needs assessment (TNA) tool and uploaded it into Open Data Kit collect, software for real-time data collection using an android phone or tablet.** TNA data collection started in Aug 2016 and will end in the first week of Oct 2016. By Sept 2016, data had been collected from 129 nurses and doctors in 41 out of the 48 health facilities in the Lubombo Region. The next steps include finalization of data collection; data analysis and reporting; dissemination of the TNA report; development of a regional training plan; and then scaling up the TNA to other regions drawing from lessons learnt in the Lubombo Region.

2b. Provide technical assistance, technical expertise and consultations, to PEPFAR partners, the MOH training unit and RHMTs, in utilization of the new Swaziland IST guidelines to improve effectiveness of IST

OVERVIEW

Following the development of the Swaziland IST guidelines in FY15, technical expertise and consultations is being provided to all trainers, RHMTs, program officers, and technical staff from MoH partner organizations to implement the IST guidelines to improve the effectiveness of trainings. This will improve and standardize training best practices.

KEY ACCOMPLISHMENTS AND RESULTS

- **Continued to support the MOH training unit and all MOH programs and partners to develop a quarterly training calendar** (June –Sept 2016) and conduct a meeting for all IST providers to develop a national IST calendar. All the PEPFAR clinical partners complied with the requirement for submitting training calendars for consolidation in the national IST calendar as per IST guidelines.
- **Provided technical assistance to the National Quality Management Program and led the process for reviewing the National Quality Management Training Manual as part of the efforts to standardize training curricula** (July 2016). ASSIST also provided technical assistance during the review of national training curricula/manual for integrated management of acute malnutrition. During the review of these curricula, ASSIST mentored the assistant training officer on standardizing training curricula.

2c. Conduct systematic training needs assessment of priority lay cadres involved in HIV care (facility and community expert clients, lay counselors and data clerks) and utilize findings to improve training delivery for lay cadres

OVERVIEW

Lay cadres play a great role in achieving the 90-90-90 HIV targets, this activity aims to identify the competences required by the lay cadre to link patients that test HIV positive into care, retain ART patients into care through counselling and facilitating ART refill, and ensure that patients on ART are retained into care and assisted to achieve viral suppression.

KEY ACCOMPLISHMENTS AND RESULTS

- Implementation of this activity is scheduled for the next quarter.

2d. Establish collaborations with at least one local training institution and provide direct technical support for development of IST training curricula for lay cadres in line with the 90-90-90 HIV targets for IST that can be sustained

OVERVIEW

This activity is in line with the USAID global framework for IST improvement which recommends the strengthening of local training institutions and infrastructure to sustainably provide IST. The project will identify and work with a one local training institution to pilot the development of a course that will be offered by the institution to train health care workers. The pilot results will inform a transition of selected courses to be offered by the local institution rather than MoH partner.

KEY ACCOMPLISHMENTS AND RESULTS

- Implementation of this activity is scheduled for the next quarter

2e. Provide direct technical assistance to the MOH training unit and the MoPs training department

OVERVIEW

The project will assist the MoH training unit and training providers to improve specific areas along the training cycle. These include TNA and design, delivery, coordination and evaluation of trainings to increase the quality of training and return on training investment. Capacity of the training unit staff will be strengthened to enable them monitor, improve and share training best practices.

KEY ACCOMPLISHMENTS AND RESULTS

- **Disseminated the new Swaziland in-service training guidelines** (July – Sept 2016). The IST guidelines are a document that guides training providers nationally on how to plan, design, conduct, evaluate and follow-up IST. They aim to standardize training practices and improve the effectiveness of healthcare worker training. The guidelines were finalized and approved by MOH Principal Secretary in FY15. The guidelines were disseminated to all training providers, programs,

partners, MOH senior staff, RHMTs, facility IST coordinators, Ministry of public service, and Ministry of education.

- Oriented 25 officers from the MOH headquarters including senior staff on the guidelines.
- Conducted workshops and oriented 40 in-service training coordinators from different facilities and training providers from different programs and partners nationally.
- **Revised and standardized the quality management curriculum** (July – Sept 2016). ASSIST provided technical expertise to the National Quality Management Program officers and led the process of reviewing the national quality management training curriculum. This is in line with the new IST guidelines which call for standard national curricula.

Activity 3. Improve quality of services in the national VMMC program through strengthening the national QA/QI/CQI oversight and support for the program

OVERVIEW

Aligned to the National Strategic Framework for 2009–2014, the Kingdom of Swaziland launched the national male circumcision policy in August 2009 to provide guidance on implementation. The initial MMC program was followed by the Accelerated Saturation Initiative and the Early Infant Male Circumcision program. VMMC IPs supporting the MMC program in Swaziland include: CHAPS (21 facilities), Population Services International (13 facilities) and “The Luke Commission” (82 mobile service points). In FY16, ASSIST was invited by USAID Swaziland to provide CQI support to improve the quality of VMMC services through providing support and mentorship in planning, implementation, evaluation, and documentation. In order to build on current ASSIST experience, reduce costs and improve scalability, all support to the Swaziland USAID-funded VMMC program is provided from the South African ASSIST office, with support from the Southern African ASSIST regional and Ugandan programs.

KEY ACCOMPLISHMENTS AND RESULTS

- **Conducted VMMC CQI baseline assessments in the five demonstration facilities** (July – Sept 2016) and the summary of the findings are shown in **Figure 63**. The national MMC manager and quality assurance manager joined the ASSIST team and participated in the assessments. During the assessments, none of the clients were found to be eligible for MMC. The baseline findings will inform the design of the capacity building interventions.

Figure 63: Swaziland: VMMC CQI baseline assessment findings (July – Sept 2016)

No.	Quality Standards Areas	Flas Manzini	CHAPS Mbabane	Hlathikhulu	Litsemba Letfu	Mkhiwa Hospital
1	Leadership and Planning	79.6	58.3	54.0	61.6	37.5
2	Management systems	86.1	74.4	71.7	89.3	76.2
3	Monitoring and Evaluation	71.4	80.2	41.9	78.8	70.7
4	Registration, group education and IEC	--	72.2	--	72.2	--
5	Individual counselling and HIV testing	--	97.6	--	97.6	--
6	Infrastructure, supplies, equipment, and environment	90.6	87.9	84.2	89.4	90.2
7	Male circumcision surgical procedure	--	--	--	--	--
8	Infection prevention	52.6	100	56.0	91.5	52.6

Scores	GOOD	FAIR	POOR	BLANK
Surgical procedure (SP) and Infection Prevention and Control (IPC)	85% +	70% – 85%	< 70%	Not Assessed
Other standards	80%+	50% – 80%	< 50%	
Overall performance	>85% Compliance with any quality standard	70% – 85% Compliance with SP and IP standards 70% compliance with all quality standards	< 70% Compliance with SP and IP standards <50% compliance with all quality standards	
	Collaborative support	Light Support	Intensive support	

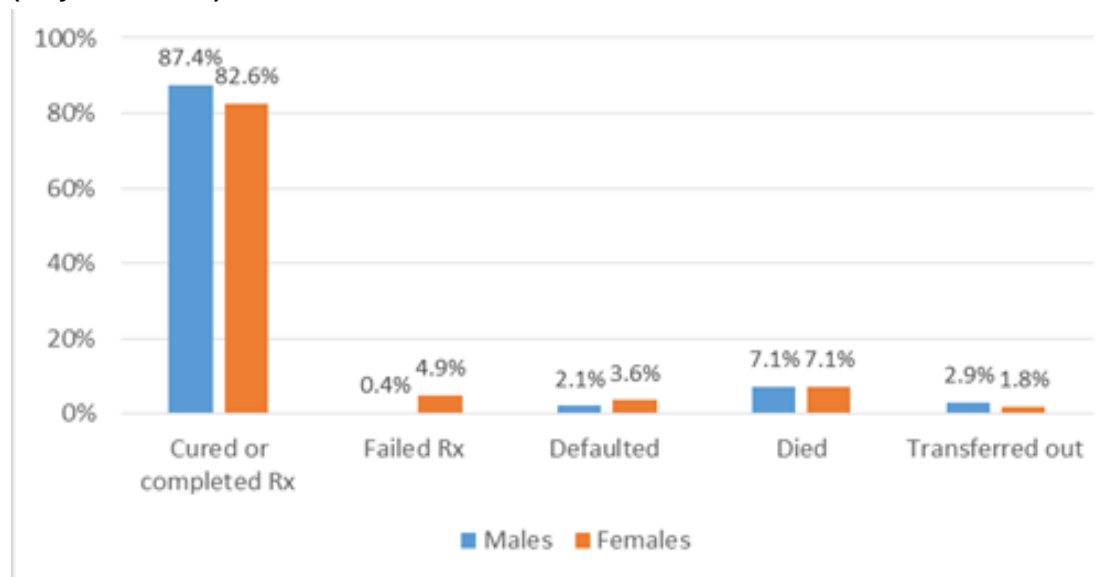
GENDER INTEGRATION

The TB-HIV study revealed that more women than men access care and IPT (which is in keeping with known health-seeking behavior patterns) but once on treatment, especially anti-TB treatment, more men than women achieve treatment success; more women fail or default treatment (see **Table 9**). However, once on treatment, especially anti-TB treatment, more men than women achieve treatment success; with more women failing or defaulting treatment (see **Figure 64**). Though study data are from 2014, the results are important and will be used to inform interventions for women living with HIV on TB treatment to improve their outcomes.

Table 9. Swaziland: Percentage of eligible patients started IPT by sex, July-Nov 2014

Sex	# IPT eligible (negative screen or diagnostic)	# IPT started (% of eligible per category/row)
Male	697	48 (6.9%)
Female	891	69 (7.7%)

Figure 64. Swaziland: TB treatment outcomes for HIV patients in care, 11 facilities, by sex (July - Nov 2014)



SUSTAINABILITY AND INSTITUTIONALIZATION

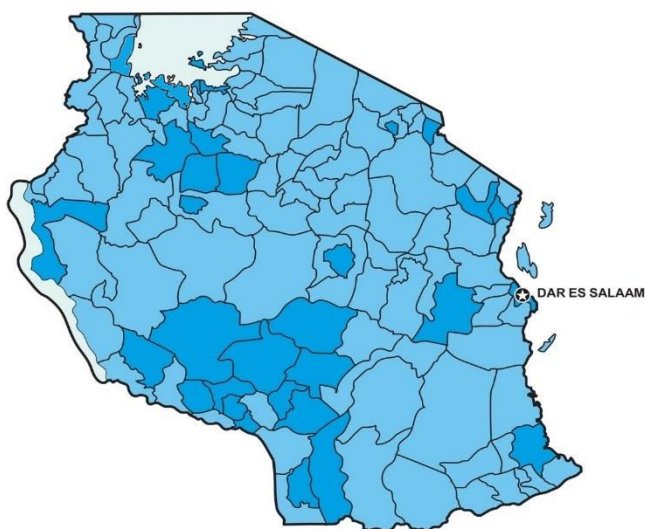
The USAID ASSIST Project provides direct technical assistance, expert consultation, and mentorship to the MOH Training Unit, Ministry of Public Service Training Department, SNAP VMMC unit, MOH Sexual and Reproductive Unit, the Swaziland Health Laboratory Service, and the MOH HRH technical working group. Tried and tested interventions, tools, and systems are incorporated by the training unit into the MOH HR Department Processes Manual to become part and parcel of how the Ministry conducts business. The personnel supported are incrementally capacitated to take the lead in ASSIST-initiated activities to encourage country ownership while the ASSIST staff provide technical support as and when necessary. The MOH Sexual and Reproductive Unit and the Swaziland Health Laboratory Service were involved in the design of the project and are working collaboratively with ASSIST and other PEPFAR regional clinical implementing partners during the pilot of the PMTCT mHealth project. After the pilot phase, the MOH and regional implementation partners are expected to scale up the intervention in additional sites within their regions beyond the 15 pilot sites.

TANZANIA

BACKGROUND

In FY16, ASSIST is continuing to support the Ministry of Health, Community Development, Gender, Elderly, and Children (MOHCDGEC) and IPs to scale up ART QI. This work is building on activities started in 2012 with ASSIST and on activities begun under the Quality Assurance Project in 2003 and continued under the USAID HCI Project from 2008 to 2012. In FY16, ASSIST strengthened QI institutionalization at the sites we previously worked in, and new sites covering high-volume facilities in priority districts of Kagera and Mara regions. ASSIST's emphasis is on 42 priority districts of high prevalence to increase impact while building the capacity of Regional and Council Health Management Teams (RHMTs/CHMTs) to sustain the gains from previous efforts. At all sites, improvement efforts focus on the quality of care package of intervention that includes scaling up HIV testing and counseling, ART, PMTCT, and VMMC in line with PEPFAR 3.0 guidance of doing the right thing at the right place.

Scale of USAID ASSIST's Work in Tanzania



- Priority Scale-up Districts – Covered
- Priority Scale-up Districts – Not Covered
- Sustained Districts – Covered



MOHCDGEC, 14 IPs



40 out of 42 priority scale-up districts +
129 out of 129 sustained districts



614 facilities



240 communities



777 QI teams



23,289,864 out of 45 million

PROGRAM OVERVIEW

What are we trying to accomplish?	At what scale?
1. Strengthen the capacity of the MOHCDGEC and IPs to continuously improve the quality of PMTCT care and support scaling up PMTCT Option B+ countrywide.	
<ul style="list-style-type: none"> • Strengthen MOHCDGEC leadership to facilitate institutionalization of QI as a tool towards achievement of e-MTCT • Support MOHCDGEC, R/CHMTs and IPs to increase access to HIV prevention, testing, care, treatment, and support to pregnant, postnatal women, HIV-exposed and infected children • Support R/CHMTs, facility improvement teams and IPs to improve retention to HIV care for infected women and their exposed infants • Support R/CHMT, facility improvement teams and IPs to improve wellbeing of the infected pregnant and breastfeeding women and their families 	<p>National</p> <p>New regions: 2/30 (Kagera and Mara) PEPFAR priority districts 40/152 Scale-up saturation to 27 districts; scale-up aggressive to 13 districts 22 high-volume sites out of 4,010 sites</p> <p>Old regions: 25 out of 30 regions, 40 out of 42 priority districts: 27 saturation and 13 aggressive 129 sustained districts 594 of 4,010 sites</p>

What are we trying to accomplish?	At what scale?
2. Support the MOHCDGEC and IPs to scale-up improvement activities for ART services to achieve sustainable patients' coverage, retention and clinical outcomes.	
<ul style="list-style-type: none"> Support MOHCDGEC, RCHMTs and IPs to scale up HIV/AIDS care improvement efforts to 2 new regions Provide TA to MOHCDGEC, R/CHMT in integrating essential services with ART program Strengthen follow-up of ART patients for retention and clinical outcomes 	National New regions: 2/30 (Kagera and Mara). PEPFAR priority districts 42/152 Scale-up saturation 27/152 districts; scale-up aggressive 13 districts 22 high-volume sites out of 4,010 sites Old regions: 25 out of 30 regions, 40 out of 42 priority districts, 27 saturation + 13 aggressive 129 sustained districts 594 of 4,010 sites
<ul style="list-style-type: none"> Strengthen patient-centered care and treatment 	2 districts in Morogoro; 14 facilities
3. Support the MOHCDGEC, MVC, IPs and local structures to strengthen quality of care, support and protection to Most Vulnerable Children (MVC) through improvement approaches	
<ul style="list-style-type: none"> Support the Department of Social Welfare (DSW) of the MOHCDGEC and MVC IPs in improving and strengthening the MVC care response system 	National: Development of national package; Guide lines; Pocket book;
<ul style="list-style-type: none"> Strengthen families and households of MVC to improve care, support, and child protection 	2/6 districts in Pwani Region
<ul style="list-style-type: none"> Strengthen service integration and community linkages 	7/33 wards in Muheza District, Tanga Region
<ul style="list-style-type: none"> Implement a comprehensive care package addressing child protection and wellbeing in a model district 	3/22 wards in Bagamoyo District and 3/18 wards in Mkuranga District in Pwani Region
<ul style="list-style-type: none"> Support the DSW of the MOHCDGEC and MVC IPs in improving and strengthening the MVC care response system 	National
4. Support the MOHCDGEC, Local Government Authorities (LGAs), and Community-Based IPs to strengthen structures and mechanisms used by communities to maximize linkages and coordination of Home-Based Care (HBC) and Social Protection	
<ul style="list-style-type: none"> Support MOHCDGEC and IPs to scale-up utilization of HBC and Standard Operating Procedures (SOPs) nationwide 	Nationwide
<ul style="list-style-type: none"> Support R/CHMT and IPs to integrate HBC, MVC, and clinical services across a continuum of care Support MOHCDGEC and IPs to strengthen M&E system 	7/33 wards in Muheza District 14 wards in Tanga City
5. Support MOHCDGEC and IPs to improve access to testing and linkage to HIV/AIDS care and services for infants and children under 15 years.	
<ul style="list-style-type: none"> Increase the proportion of HIV-exposed infants and children seeking outpatient and inpatient care Increase the proportion of HIV-exposed children who receive HIV deoxyribonucleic acid (DNA)/PCR test results within 4 weeks of sample 	4/30 regions: Njombe, Tabora, Shinyanga and Morogoro) 22/24 districts 42/222 health facilities

What are we trying to accomplish?	At what scale?
collection <ul style="list-style-type: none"> • Increase proportion of HIV-positive infants and children in whom ART is initiated • Increase the proportion of HIV-infected infants and children who are retained to ART 	
6. Work with MOHCDGEC and IPs to improve safety, increase quality and the level of integration of Voluntary Medical Male Circumcision services	
<ul style="list-style-type: none"> • Support the MOHCDGEC in improving access, safety, and quality of medical male circumcision (MMC) for adults over 10 years and children under 60 days • Support IPs and facility providers to reduce adverse effects resulting from male circumcision • Support the MOHCDGEC frontline workers to improve VMMC logistics and supplies • Increase the capacity of health care providers and IPs to provide high-quality male circumcision services 	5/30 regions: Njombe, Iringa, Mbeya Shinyanga, and Tabora 34/66 districts/councils 55/1027 health facilities 50 MMC national and regional trainers for 5/13 priority regions Establish 34 district/council QI teams working with early infant male circumcision (EIMC) & VMMC VMMC (adult) target 1,518,683 in 5 regions EIMC target: 2000 in 5 regions
7. Work with MOHCDGEC and IPs to improve quality of HIV rapid testing	
<ul style="list-style-type: none"> • Strengthen integration of PITC in primary care • Support the MOHCDGEC frontline workers to improve HIV testing, safety and referral, logistics and supplies 	1/30 regions (Dodoma) 1/42 districts (Dodoma Municipal Council) 16/72 facilities in Dodoma Municipal Council Assessment and improvement quality of care testing 27 of the 42 priority districts
8. Support MOHCDGEC and IPs to improve continuum of care and retention of PLHIV through strengthening of linkages between community and facility actors	
<ul style="list-style-type: none"> • Improve coordination and collaboration of facility and community providers to provide seamless link from HTC to ART for all clients • Promote clients and community involvement in HIV care linkages through task sharing and support • Support the R/CHMTs to improve the information systems to report on program progress 	4/30 regions: Shinyanga Njombe, Iringa, and Tanga 5 districts, 18 wards, 59 communities
9. Support MOHCDGEC and IPs to improve quality of integrated PMTCT services in MNCH settings	
<ul style="list-style-type: none"> • Support MOHCDGEC, IPs, R/CHMT in the development of implementation of integrated care package for PMTCT and MNCH services • Support MOHCDGEC, IPs, R/CHMT in integrating TB/HIV interventions in MNCH settings 	3/30 regions: Katavi, Ruvuma, and Rukwa 13 out of 42 priority districts, 34 sites

Improvement Activity

Activity 1. Strengthen the capacity of the MOHCDGEC and IPs to continuously improve the quality of PMTCT care and support scaling up of PMTCT Option B+ country wide

OVERVIEW

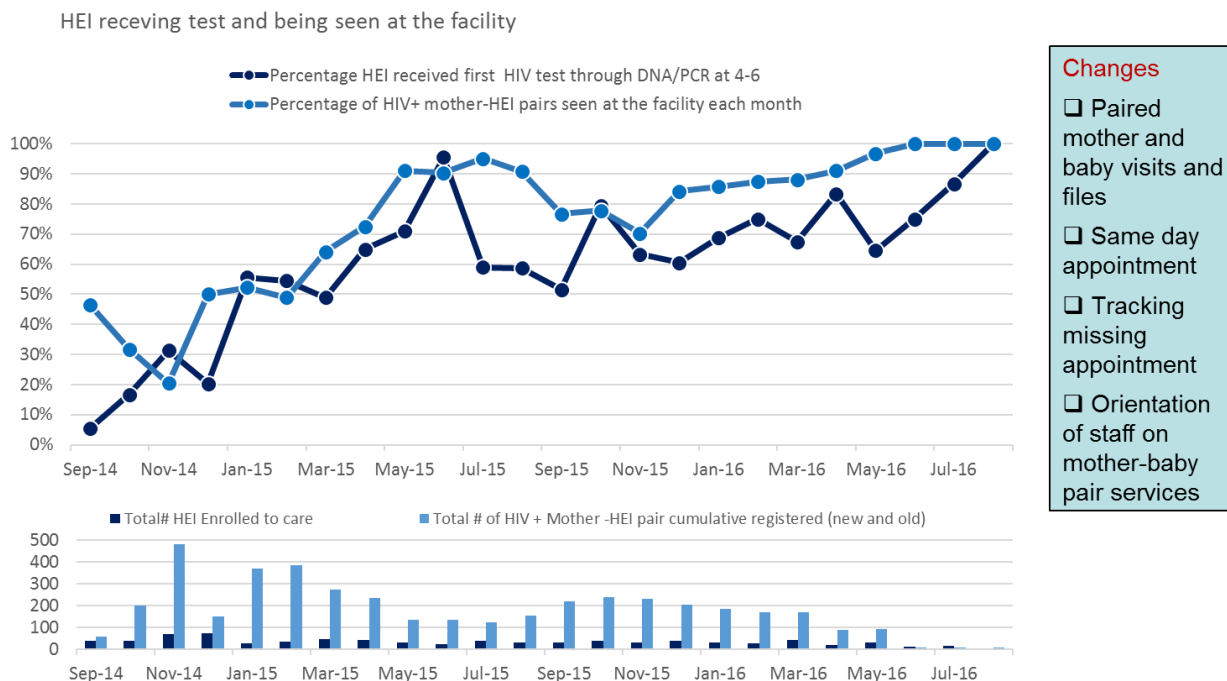
In FY16, ASSIST continued to provide technical support to MOHCDGEC structures, regional IPs, FBOs, and community groups to apply QI methods towards attaining PEPFAR 3.0 and UNAIDS 90-90-90 goals on achieving HIV epidemic control. Learning sessions, quarterly coaching and mentoring visits and on the job training were directed to the full range of HIV services in the 40 PEPFAR priority high-volume districts and biannual support to 129 PEPFAR sustained response low-volume districts.

KEY ACTIVITIES AND RESULTS

Morogoro Region

- **Two coaching and mentoring sessions were conducted during FY16.** In November 2015, ASSIST supported R/CHMT and regional IPs in coaching and mentoring staff from 8 PMTCT sites in Morogoro Region reaching 87 QI team members. Emphasis was on increasing early ANC booking, male partner HIV testing at Reproductive and Child Health (RCH) services, early infant diagnosis (EID), and reduction of loss to follow-up. QI teams were coached on how to correctly use appointment registers to identify and track clients who miss appointments through provision of a weekly list of clients missing their appointments to home based care (HBC) coordinators for follow up. Regional IPs and R/CHMTs continued with redistribution of supplies between facilities to minimize stock-outs. The second coaching was conducted in September 2016 where RHMT (2), CHMT (4), champions (2) and QI team members (62) were supported. Facility QI teams continued communication sharing information on status of supplies and success tested changes through WhatsApp messaging.
- **Results:**
 - Retention to care for mother baby pairs increased from 46% -100 % between September 2014 and August 2016 (**Figure 65**).
 - Early infant diagnosis at 4-6 weeks increased from 6% to 100% and 2nd HIV test 6 weeks after cessation of breastfeeding increased from 0% to 100% between September 2014 and August 2016 (**Figure 65**).
 - HIV testing through PITC at inpatient wards of 8 facilities increased from 1% to 81% from May 2014 to August 2016.

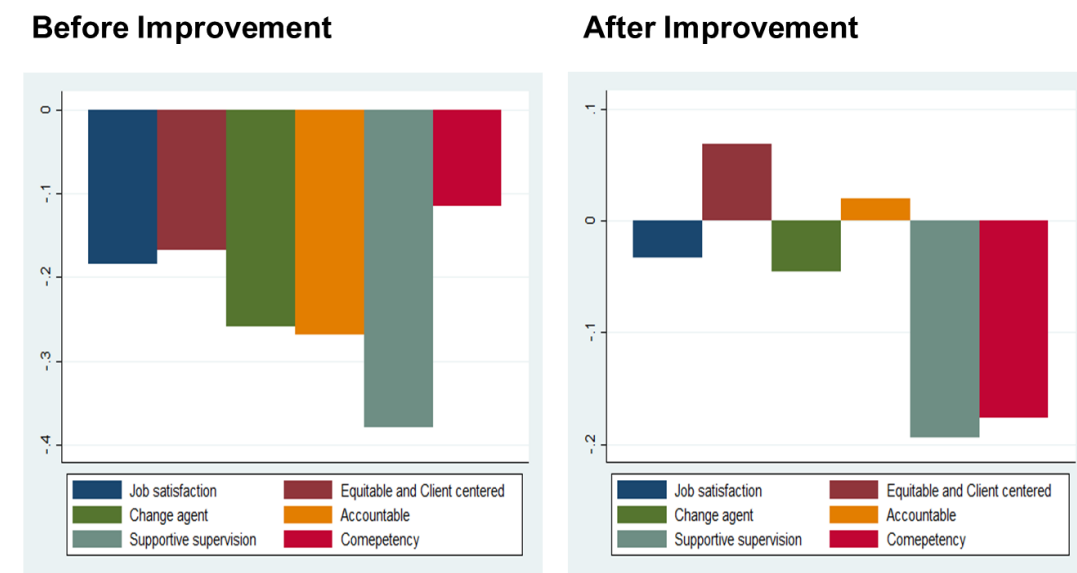
Figure 65. Tanzania: Percentage of HIV+ mother-HEI pairs seen each month and percentage HEI receiving their first HIV test through DNA PCR at 4-6 weeks, 8 facilities, Morogoro Region (Sept 2014 – July 2016)



Njombe Region

- **ASSIST staff conducted coaching and mentoring in 11 sites implementing QI activities for HIV-infected children.**
- **Results:**
 - HIV-exposed children receiving their DNA PCR test within 4-6 weeks of birth improved from 42% in May 2014 to 78% in August 2016.
 - HIV-exposed children receiving their second HIV test through antibody testing 6 weeks after complete cessation of breastfeeding in 8 sites of Njombe Region increased from 35% in May 2014 to 100% in August 2016.
 - HIV-infected children retained on ART 12 months after starting ART in 8 sites of Njombe Region increased from 71% in July 2013 to 93% in August 2016.
- **The second learning session on continuous QI for Pediatric ART services was conducted to 44 QI team members, 12 CHMT, and 2 RHMT members of which 36 were female and 22 were male (Sept 2016).**
- **ASSIST conducted a study to compare levels of engagement before QI intervention in December 2014 and after intervention September 2016 for 44 QI team members in 11 facilities in Njombe region.** Before QI intervention health workers' engagement levels in all areas were below the mean Z-Score and after intervention there was significant improvement in the levels of engagement except for competency as shown in **Figure 66**.

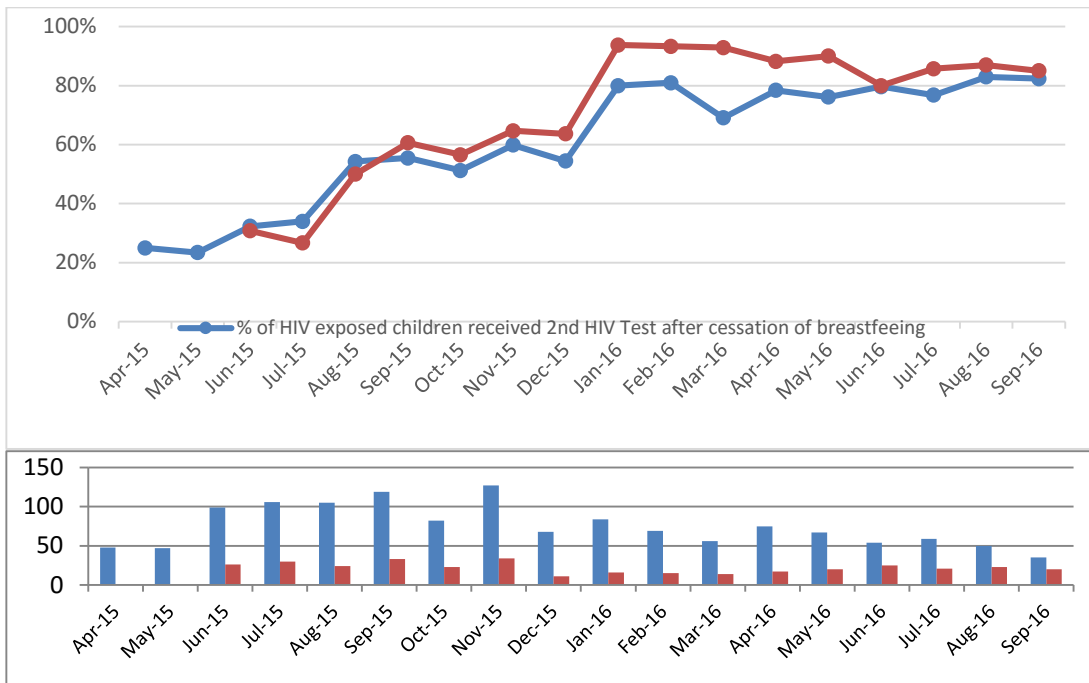
Figure 66. Tanzania: Comparison study to evaluate the impact of QI activity on health worker levels of engagement, 11 facilities, Njombe Region (Dec 2014 vs. Sept 2016) (n=44 QI team members)



Dar es Salaam and Pwani Regions (April 2015 – April 2016)

- **ASSIST, in collaboration with PASADA, conducted three coaching sessions to 10 facilities** (Dec 2015, Feb 2016 and May-June 2016), reaching an average of 60 health workers at each visit. In July 2016 QI activities were scaled up to three new PASADA sites in Dar es Salaam and Pwani.
- **ASSIST in collaboration with THPS conducted a learning session to 15 health facilities supported by THPS in Pwani Region** (March 2016). During the learning session 35 health workers from 15 health facilities and 6 THPS staff were trained on QI.
- **Results:** Improvement is being observed in EID from 32% to 72% between June 2015 and January 2016 (**Figure 67**), early ANC booking (13% to 23%) between June 2015 and February 2016, and male partner testing for HIV at RCH (17% to 27% between June 2015 and February 2016).
- ASSIST conducted a study on Difference of Differences to determine performance output differences in 2 QI supported and 2 non-supported sites (25th July-10th August 2016). Statistically significant results were seen in services received by pairing mothers and babies (**Figure 68**).

Figure 67. Tanzania: Percentage of HIV-exposed children who received second HIV test in 10 sites, Dar es Salaam and Pwani (April 2015 – Sept 2016)

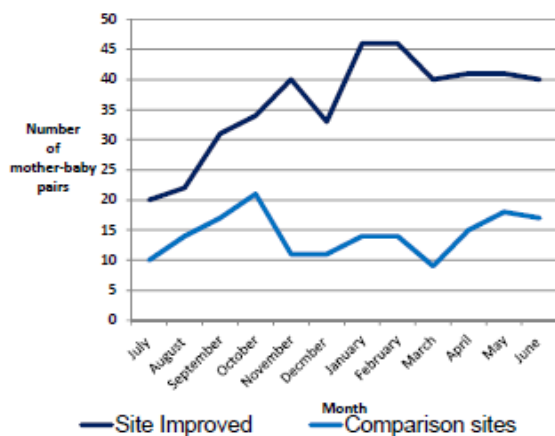


Tested Changes

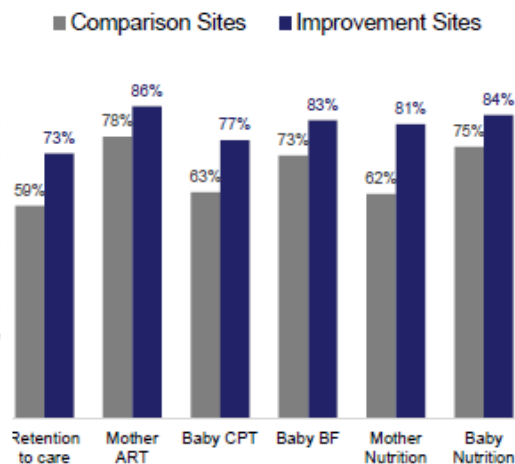
- Introduced a tool for Identification of eligible children for confirmatory testing
- Health education to mothers to attend postnatal care

Figure 68. Tanzania: A study comparing performance in QI sites and control sites showing improved mother-baby pairing and improved access to care, 2 improvement sites, 2 comparison sites, Dar es Salaam (DSM) and Pwani regions (July 2015 – June 2016)

Mother & baby pairing between two improvement and two comparison sites of Dar es Salaam and Pwani regions July 2015 - June 2016



Service outcomes in mother-baby pairing in intervention and comparative sites, DSM and Pwani regions, July 15-June 16



Scaling up the Partnership for HIV-Free Survival

Mbeya Region (Mufindi District) and Tabora Region

- **Coaching and mentoring sessions for PHFS were held across the 10 initial sites (Oct 12-16, 2015) and 28 PHFS scale up-sites of Mbeya City (March 7-18, 2016). Results:** Post-natal services by mothers attending all four standard postnatal visits increased from 32% in Jan 2015 to 64% in Feb 2016. Counselling on nutrition to HIV pregnant and lactating mothers improved from 0% in January 2015 to 43% in February 2016, and exclusive breastfeeding rates improved from 46% to 97% during the same time period.
- **In Mufindi, coaching and mentoring session conducted was with 23 health care providers and 3 CHMT members in the initial 10 sites PHFS sites to assess the positivity rate among confirmed HIV-exposed children before (2013) and after PHFS implementation (2015) (Jan 25-29, 2016).** Results showed out of 1,628 children that received confirmatory test by 2015, 54 (3%) infants turned HIV positive.
- **In Tabora, ASSIST, in collaboration with EGPAF, provided technical support to CHMT to lead a learning session for initial and scale-up PHFS sites in Nzega District (Nov 10 -13, 2015).** Twenty-eight health workers from 30 sites and 5 CHMT members attended. Participants shared experiences in improving PMTCT services.
- **ASSIST supported EGPAF to conduct learning session one to 30 health workers from 20 sites of Igunga and Tabora Municipal Councils, to spread the PHFS change package for improving PMTCT services towards attaining virtual elimination of MTCT (Aug 2016).** A total of 15 PMTCT managers: RHMT, CHMT, Health Management Team (HMT) Home Based Care (HBC) coordinator were oriented on QI and defining their roles. To support the community component, 20 home-based care (HBC) workers were also involved.

Engagement, Adherence, and Retention (EAR) Program

Kyela and Mbeya Districts

- **ASSIST conducted the first learning session with 6 high-volume sites implementing PMTCT/ART/pediatric ART in Kyela District Council (DC) to orient 31 participants (Aug 16-19, 2016).**
- **Conducted the second QI learning session with five high-volume sites in Mbeya DC (Aug 22-24, 2016).** During the session, 28 participants shared experiences on implementing patient self-management, retention, and NACS.

Tanga, Mara, Kilimanjaro and Arusha Regions

- **ASSIST conducted the first learning session in Korogwe Town Council and Tanga City Council (Feb 8-13, 2016).** The learning session brought together CHMT, service providers from 8 high-volume health facilities from Tanga City, and 4 from Korogwe. A total of 2 RHMT, 8 CHMT, 50 health workers, and 47 HBC providers were supported to understand and use improvement methods.
- **Follow-up coaching and mentoring visits to the above facilities and another 3 in Muheza DC were conducted (June 20 – July 8, 2016),** reaching 3 RHMTs, 12 CHMTs, 40 health workers, and 100 community HBC providers.
- **ASSIST conducted QI learning sessions to 16 high-volume health facilities (5 hospitals, 6 health centres, and 5 dispensaries) providing ART/PMTCT services in Rorya DC and Musoma Municipal (May 3rd to 11th, 2016).** A total of 4 RHMT, 12 CHMT, and 80 health workers attended the session. Teams were oriented on the concept of QI and its principles and developed QI work plans for the next action period.
- **ASSIST conducted QI learning sessions to 120 health workers in four batches. Participants included RHMT, CHMT, and health workers from 49 sites (Sept 2016).** Teams were oriented on QI concepts. The training included sessions to review the indicators as it was found that most facilities were monitoring different areas.

Shinyanga Region

- **Coaching and mentoring was conducted to 50 health workers from 7 health facilities in 4 district councils: Shinyanga Municipal, Aseton District Council, Kihama Town Council, and Malala District Council** (Aug 2 – Sept 1, 2016).
- **Results:** HIV testing at OPD/IPD among children under 15 years has increased from 20% in Sept 2015 to 89% in Aug 2016. Enrolment of HIV-infected children under 15 years to care and treatment increased from 24% in Sept 2015 to 69% in Aug 2016. Children under age 15 enrolled into CTC with CD4 results increased from 42% in Sept 2015 to 95% in Aug 2016.

Activity 2. Support the MOHCDGEC and IPs to scale up improvement activities for ART services to achieve sustainable patient coverage, retention, and clinical outcomes

OVERVIEW

In FY16, ASSIST supported the MOHCDGEC, IPs, and R/CHMTs to scale up ART improvement efforts to priority districts in 5 new regions of Mara, Ruvuma, Rukwa, Dodoma, and Mbeya. In these new regions, ASSIST worked with R/CHMTs to establish QI activities in high-volume facilities. ASSIST also continued to provide technical support to R/CHMTs and partners in initial regions to improve identification and enrolment to HIV care, retention, and clinical monitoring of PLHIV.

KEY ACCOMPLISHMENTS AND RESULTS

Shinyanga

- **ASSIST conducted QI coaching and mentoring sessions in 7 health facilities to improve retention of HIV-positive adults and children at care and treatment clinics (CTCs).**
- **Results:** Significant increase in the percentage of infected infants and children <15 years enrolled into CTC started on ART from 24% in September 2015 to 69% in August 2016.

Dar es Salaam and Pwani regions

- **In FY16, ASSIST, in collaboration with PASADA, conducted three coaching and mentoring sessions to 10 facilities** (Dec 2015, Feb 2016 and May-June 2016). In July 2016, QI activities were scaled up to 3 new PASADA sites in Dar es Salaam and Pwani. As a result of these efforts: Missing scheduled appointments among PLHIV decreased from 48.6% April 2015 to 26% April 2016. Loss to follow-up for PLHIV in all ages decreased from 26% April 2015 to 5% April 2016.

Kigoma Region

- **ASSIST, in collaboration with THPS, conducted the first learning session bringing together 20 facilities from all 7 districts in the region** (June 2016). One RHMT, 4 CHMTs, 40 health workers, and 5 THPS staff were oriented on QI approaches and principles.
- **Coaching and mentoring was conducted with 16 health facilities** (Aug 29 – Sept 9, 2016). A total of 103 health workers were coached to conduct process analysis; develop, test, and implement changes; and use run charts to monitor improvement progress. Six staff from THPS were supported on how to conduct coaching and mentoring on QI for PMTCT and ART services.

Engagement, Adherence and Retention Program

- **ASSIST and R/CHMTs conducted a baseline assessment in five high-volume sites of Mbeya DC on determinants of engagement, adherence, and retention to treatment and community resources to support self-management for PLHIV** (Oct 17-31, 2015). Data collection was disaggregated by sex and age. The analysis revealed the following: Nutrition assessment was being carried out routinely but categorization was poor. Referral from facility to the community level was weak; in referred cases there was no evidence of whether clients reached the referred sites, and reasons for referral was not indicated. Not all facilities had a self-management program. Monitoring of viral load was not done. An average of 76% of HIV clients were found to be keeping their scheduled appointments. Most facilities do not use the CTC 2 card codes effectively, making it difficult to interpret issues.
- **A one-day orientation was done with 15 peer mentors from the five sites implementing EAR on the chronic care model and how to assist clients to set and meet their goals** (Dec

8, 2015). This was followed by a three-day (Dec 10-12, 2015) learning session for 15 health care providers from the same sites.

- **ASSIST and CHMT teams carried out follow up coaching and mentoring sessions to the 5 sites** (Feb 22-26, 2016). A total of 18 health care providers, 7 peer mentors, and 2 CHMT members were reached.
- **Results:**
 - 604 out of 803 (75%) clients eligible for the program had self-management plans, and 170 out of 604 (28%) clients with plans had attained their goals (February 22-26, 2016).
 - Percentage of clients who were in care for at least 6 months who were clinically well (working functional status, no weight loss of >2kgs, no new opportunistic infections, increasing CD4) increased from 41% in Dec 2015 to 80% in July 2016.

Activity 3. Support the MOHCDGEC, MVC IPs, and local structures to strengthen quality of care, support, and protection to MVC through improvement approaches

OVERVIEW

MOHCDGEC and partners are committed to improving the life of most vulnerable children and their families through strengthening community systems and structures in allocating and mobilize local available resources to ensure care, support and protection for most vulnerable children (MVC). In FY15, ASSIST started to work with the Department of Social Welfare (DSW) and IPs to review and update the national MVC QI guideline and develop the essential service package and training guide for MVC and adolescents affected by and living with HIV. In FY16, ASSIST continued to work with IPs, DSW, and CHMTs in building capacity through coaching and mentoring to MVC Committees (MVCC)/QI teams (QITs) and local structures in identification of gaps and planning for changes to improve performance in service delivery for most vulnerable children and households. The essential service package for vulnerable children and adolescents was finalized and will support community service providers in effective case identification, linkage to care and support as well as linking MVC and adolescents to access HIV services (testing, enrolment, and retention to HIV care).

KEY ACCOMPLISHMENTS AND RESULTS

- ASSIST worked with DSW, MVC IPs to develop the “**Essential service package for Most Vulnerable Children and Adolescents Affected by and Living with HIV**” as well as a simplified version for use by community-level service providers. These tools will serve as a quick reference for community service providers in identifying and linking MVC to HIV care and other social services (Oct 2015 – Sept 2016).
- **ASSIST staff, DSW, and other stakeholders reviewed the MVC QI guideline of 2009 to accommodate HIV issues for MVC and adolescents in line with NCPA II** (Oct 2015 – Sept 2016).

Bagamoyo District Council

- **111 members from 21 out of 25 community teams were coached in sustaining results and mobilization of resources within their community** (Nov 23 – 27, 2015).
 - Mkenge QIT has sustained improvement where by starting this year they acquired 2 acres of land and allocated funds amounting to TShs. 500,000 to support MVC. The funds were used to pay school fees for MVC in need. Mkenge Village government paid TShs. 1,800,000 for Community Health Fund (CHF) access for 386 households, benefiting 1764 people.
 - Kidomole MVCC team convinced the local government to allocate TShs. 25,000,000 for renovation of Kidomole Primary School. Through community mobilization, the team managed to secure TShs. 1,000,000 for renovation of school latrines.
- **ASSIST conducted coaching and mentoring to 177 members from 24 of 25 MVCCs and/or Community QI Teams** (May 8-20, 2016). Teams were supported to develop mechanisms for sustaining their results and mobilization of resources within the community.
- **ASSIST conducted validation study of team functionality in Bagamoyo starting in three wards of Dunda, Kiwangwa, and Fukayosi which have been receiving continuous support as compared to other teams in three selected wards of Lugoba, Msata, and Magomeni which have received minimal support in implementation of QI activities** (July 25 – Aug 5,

2016). The aim of the study was to assess the role of coaching in sustaining team functionality (performances, identify gaps and document challenges related to teams in data collection processes) and assess the role of coaching to teams in sustaining improvement results in service delivery for MVC. Sixty-one people were included in the study through focus group discussions and face-to-face interviews. Minimally supported teams had no action plans, provided services more sporadically, and did not keep records. Frequently supported teams had action plans, continued testing changes, and monitored progress towards achieving set goals through indicator matrix. In addition, they updated their MVC data as per DSW guidance.

Mkuranga District Council

- **Coaching was conducted to three wards of Kimanzichana, Mkuranga and Kiparang'anda with the purpose of strengthening community child protection systems in preventing and responding to child abuse, violence, and exploitation and provision of quality services to MVC** (Dec 2015; April 2016). During coaching it was noted some local leaders and teams are mobilizing internal resources to support MVC and caregivers (e.g., in Kolagwa, the MVCC raised TShs. 150,000 and acquired other funds from Savings and Internal Lending Communities (SILC) to pay for CHF, education, and other basic needs). Village authorities are also supporting and taking actions on cases related to abuse and exploitation.

Activity 4. Support the MOHCDGEC, LGAs, and community-Based IPs to strengthen structures and mechanisms used by communities to maximize linkages and coordination of HBC and Social Protection

OVERVIEW

In FY16 the community-based program faced two strategic shifts: 1) Unlike previous years where PEPFAR's response to HIV epidemic was even across the country as were ASSIST's, from FY16 PEPFAR decided to focus on geographical regions with high concentration of HIV in order to achieve sustained epidemic control, and the 42 highest burden districts were identified countrywide; and 2) the dramatic change in the pattern of home-based care needs among most PLHIV changed from predominantly morbid and palliative clients to healthy people requiring targeted support for chronic care. Because of these programmatic shifts, the Tanzania Mission asked that the ASSIST community-based HIV portfolio in FY16 support the MOHCDGEC and community IPs to revise community home-based care guidelines, SOPs, M&E systems, and tools to match new programmatic requirements.

KEY ACCOMPLISHMENTS AND RESULTS

- **ASSIST supported the MOHCDGEC and IPs to revise HBC SOPs to expand the scope of the national community care and support from a palliative care to a community-based care and support model with emphasis on increasing early ART initiation and retention** (Nov 9-13, 2015).
- **ASSIST supported the MOHCDGEC and IPs to revise M&E tools, develop and pilot Community-Based HIV and AIDS services (CBHS) performance indicators** (Jan 25-29, 2016).
- **ASSIST supported the MOHCDGEC and IPs to develop National Guidelines for CBHS** (May 23-27, 2016).

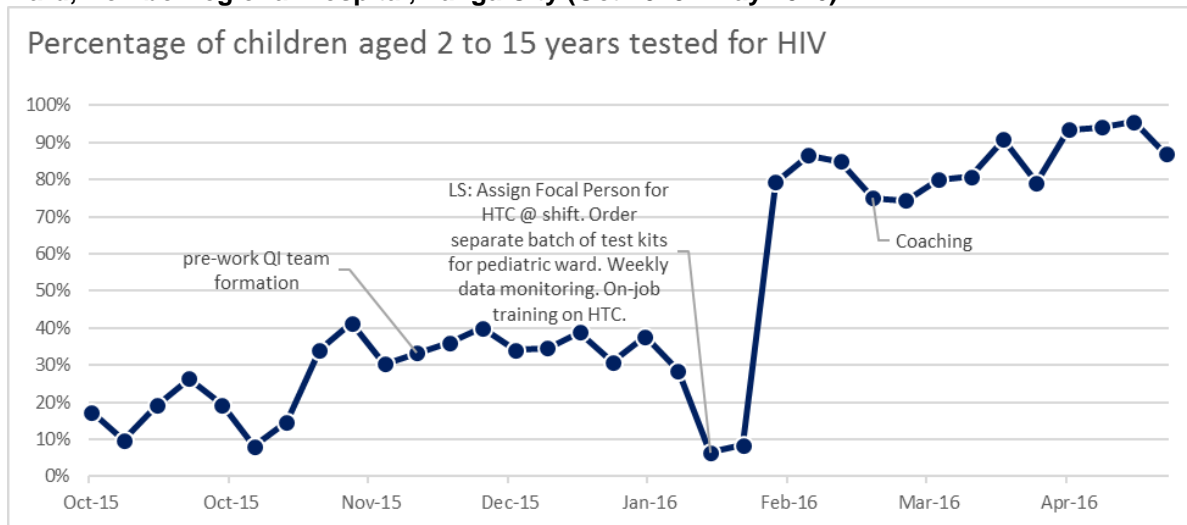
Tanga Region

- **ASSIST conducted coaching and mentorship to 8 wards community teams and three health facilities in Muheza District.** One RHMT, 6 CHMTs, and 8 QI teams were supported to develop improvement interventions to increase HIV testing among communities, tracking clients who are lost to follow-up and referrals to social services (Feb 1-6, 2016).
- **ASSIST in collaboration with RHMT and CHMTs conducted the first learning session for facility and community service providers serving 10 high-volume facilities in Tanga City and 3 in Korogwe District** (Feb 15-20, 2016).
- **ASSIST supported R/CHMTs for Korogwe DC, Korogwe Town Council, Muheza DC, and Tanga City to conduct coaching and mentoring sessions to 16 high-volume health**

facilities and community teams in Muheza DC. The aim of this activity was to strengthen the capacity of the service providers, communities, and IPs to continuously improve the quality of ART/PMTCT care. A total of 167 community team members from Muheza, 71 health workers, 3 RHMT, and 12 CHMT from Muheza, Korogwe and Tanga city were reached (June 20- July 8, 2016).

- **Improved access to HIV testing among children admitted in pediatric ward at Bombo Regional Hospital Tanga City** from 17% in October 2015 to 87% in May 2016 (**Figure 69**).

Figure 69. Tanzania: Improving access to HIV testing among children admitted in pediatric ward, Bombo Regional Hospital, Tanga City (Oct 2015 - May 2016)



Activity 5. Support MOHCDGEC and IPs to improve access to testing and linkage to HIV/AIDS care and services for infants and children under 15 years

OVERVIEW

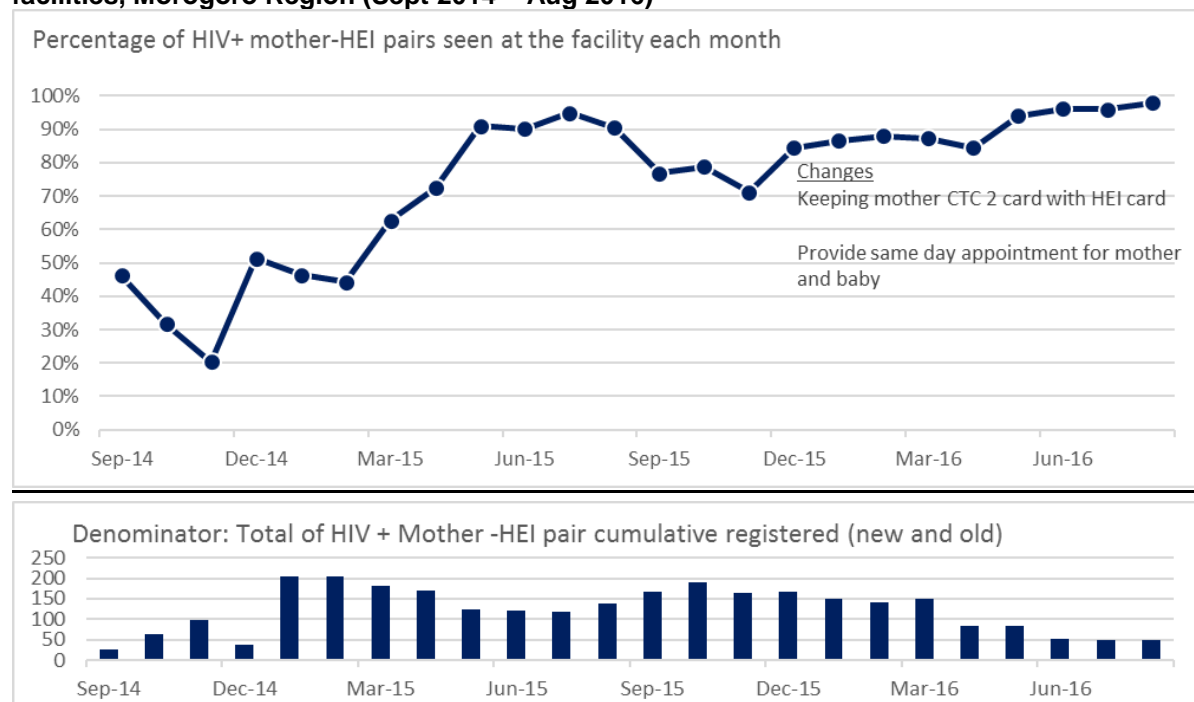
In FY15, ASSIST supported MOHCDGEC structures and IPs in applying QI methodologies in high-volume facilities in Njombe, Shinyanga, Morogoro, and Tabora to increase access to HIV testing for infants and children under 15 and linking HIV-infected children to ART services. In FY16, ASSIST extended TA to IPs, health facility QI teams, health workers, and communities in priority districts to attain the 90/90/90 targets of UNAIDS, PEPFAR, and the Children’s Investment Fund Foundation. Drawing from past experiences, ASSIST supported the MOHCDGEC in its pursuit to achieve the Accelerating Children’s HIV/AIDS Treatment (ACT) target.

KEY ACCOMPLISHMENTS AND RESULTS

Morogoro

- **TA during coaching and mentoring was provided to 10 sites in Morogoro region** (Nov 2015). EID at 4-6 weeks from increased from 7% in May 2014 to 81% in October 2015 through continuous reminders to clients during pregnancy and giving appointments for postnatal clinic at discharge after delivery where they are linked to PMTCT.
- **Results:**
 - HTC for children under 15 years in pediatric wards from increased from 1% in May 2014 to 60% in Oct 2015 through target setting for PITC, keeping standby HIV counsellors for each shift, and including pediatric PITC in ward reports.
 - Retention of MB pairs at RCH increased from 46% in Dec 2014 to 98% in Aug 2016 through giving same-day clinic appointment and keeping baby’s record in mothers file (**Figure 70**).

Figure 70. Tanzania: Percentage of HIV-positive mother-HEI pairs seen each month, 8 facilities, Morogoro Region (Sept 2014 – Aug 2016)



- Coaching was conducted to 15 facilities** (June 20-July 1, 2016). The following was observed: There is increase in number of children who receive testing and counseling in pediatric wards, OPD, and RCH due to facility in-charges following up and demanding weekly reports. Assigning a nurse to coordinate/provide testing and counseling to children in most of the facilities. Improved documentation contributed to correct request and ordering of test kits and therefore reducing shortages. On-the-job training done by trained staff to other staff on DBS sample collection, maintaining test kits, and giving the same appointment to mother and her child on 28th day contributed to increased number of children who are receiving their first HIV test at the right time (4 to 6 weeks of age). Due to emphasis and priority explained to health care workers during coaching that all children tested HIV-positive should be initiated on ART, children who are currently on ART has increased from 89% in October 2015 to 100% in Aug 2016 in Turiani Designated District Hospital; and from 86% in Oct 2015 to 100% in March 2016 at St. Kizito Hospital.

Tabora Region

- Coaching and mentoring was conducted to priority sites in three districts** (Nov 16-25, 2015). QI teams were supported to address prevailing gaps to ensure access to HTC among children, prompt linkage into HIV care through escorting clients, strengthening feedback mechanisms, and establishment of appointment schedules to improve retention of children under 15 started on ART.

Dar es Salaam and Pwani regions

- Coaching and mentoring was conducted in 10 sites supported by PASADA, reaching 58 services providers including HBCs and peer mentors** (Feb 2016).
- Results:**
 - Increased percent of HEI tested for HIV–DNA/PCR by 4-6 weeks from 52% in April 2015 to 80% in May 2016 in 10 sites in Dar es Salaam and Pwani regions (**Figure 71**).
 - Increased percent of HIV exposed children receiving second HIV test after cessation of breast milk from 25% in April 2015 to 20 % in July 16 in 9 sites in Pwani Region.
- Sites continued to support adolescent clubs on issues like: disclosure, adherence, sexuality and psychosocial support to improve adherence to treatment.

Njombe Region

- **Coaching and mentoring was conducted in 11 sites where 24 providers were reached and assisted in improving their performances in care of clients** (April 11-22, 2016). During the visit, improvement was noted in linking identified HIV+ children with HIV care from 36% in May 2014 to 64% in Aug 2016 in 11 sites Njombe Region.
- Coaching and mentoring was done from June 26-July 9, 2016 in 11 sites where 26 providers were met and trained on addressing performance gaps and improvement seen among cohort of children under 15 years being alive and on ART 12 months after starting treatment. At eight sites, the percentage of children under 15 on ART and alive 12 months after starting treatment increased from 71% in July 2014 to 93% in August 2016 (**Figure 72**).
- Sharing experiences learning session was conducted from 5-8 September 2016 where 44 QI team members, 12 CHMT members, and 2 RHMT representatives participated.

Figure 71. Tanzania: Percentage of exposed children receiving first DNA PCR test within four to six weeks and confirmation of HIV status after cessation of breastfeeding, 10 sites of Dar es Salaam and Pwani regions (April 2015 – May 2016)

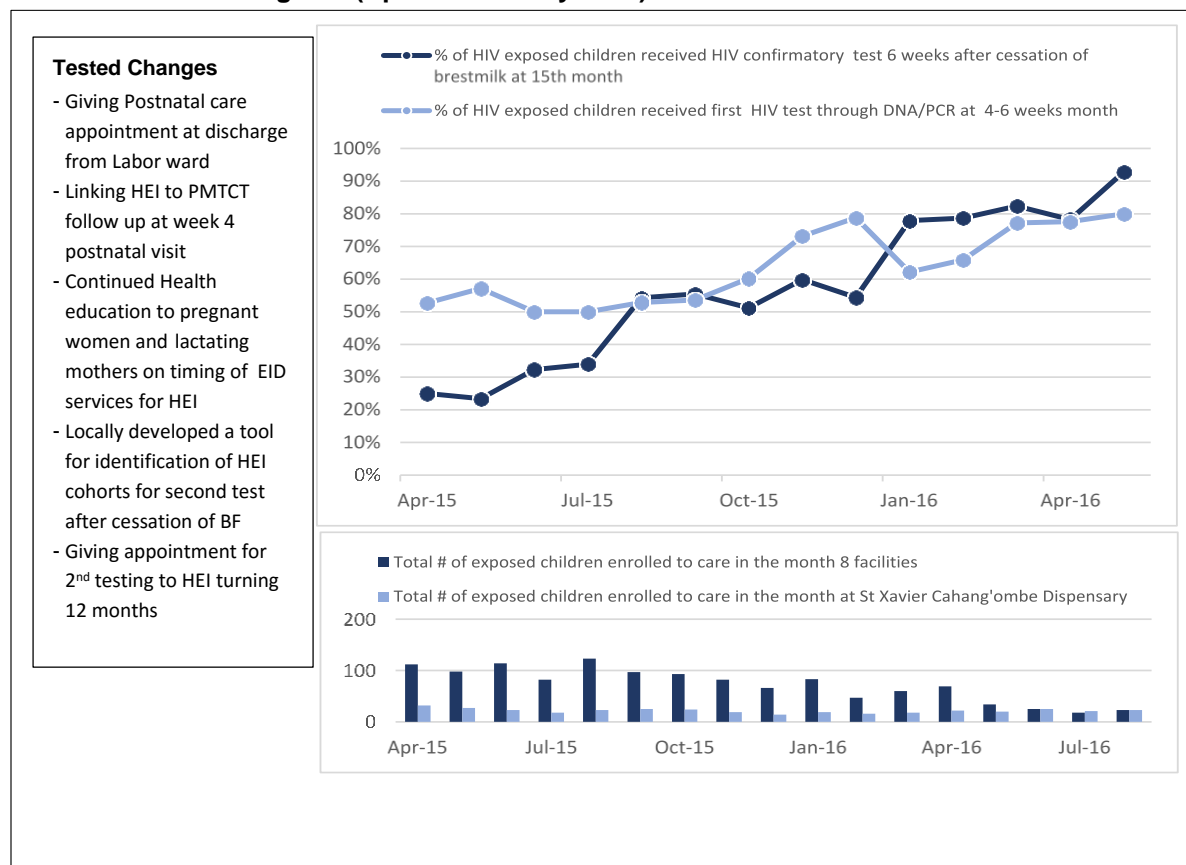
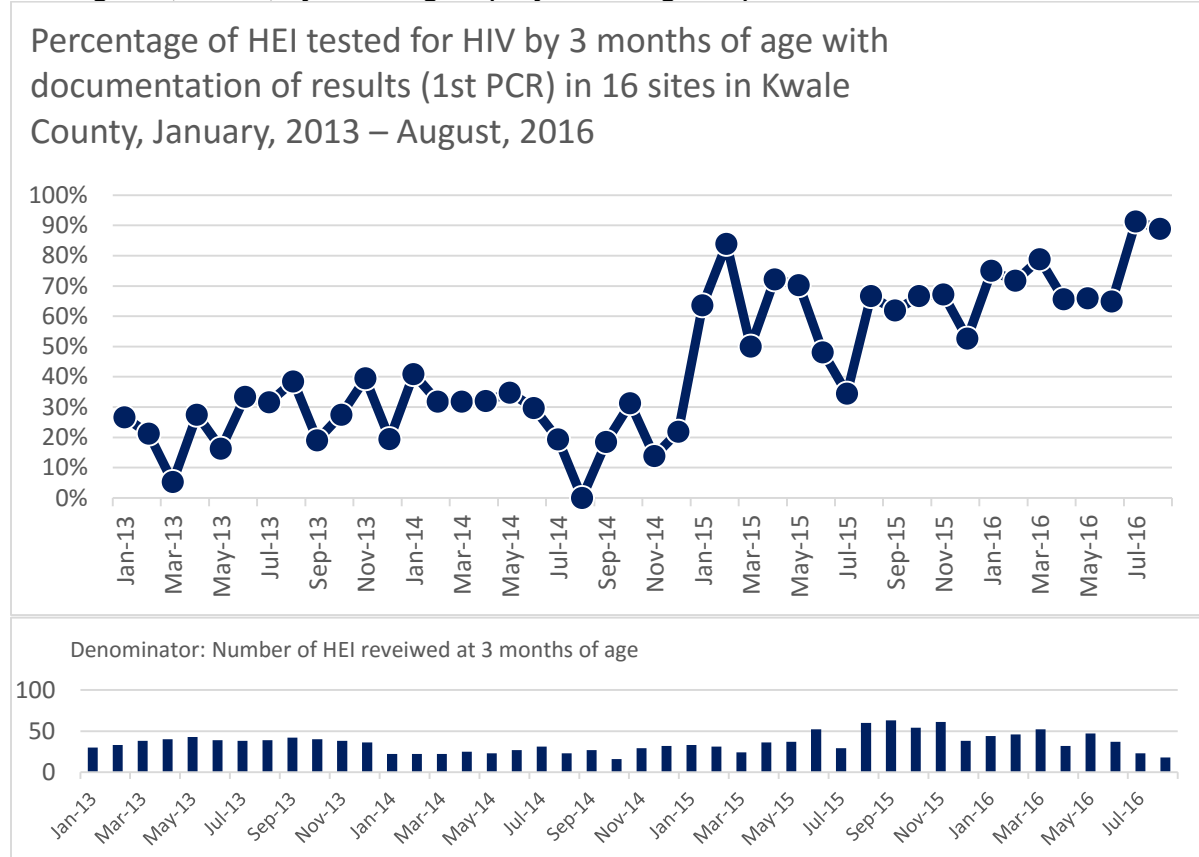


Figure 72. Tanzania: Percentage of children <15 years cohort alive and on ART 12 month after starting ART, 8 sites, Njombe Region (July 2014-Aug 2016)



Shinyanga Region

- **Coaching and mentoring was conducted to Shinyanga Regional Hospital (April 11 and 28, 2016) and Kambarage Health Center on (April 20 and May 16, 19, 2016) reaching 18 health workers.**
- **Results:**
 - Exposed infants tested in the quarter: 120/180 = 67% in 7 facilities from Shinyanga Region.
 - A total number of 7911 children under 15 years have been tested. Of these 104 (1.3%) were found to be HIV+, and 97 out of the 104 (93.3%) were enrolled into care and treatment in 7 facilities from Shinyanga Region.
 - Improvements were observed among exposed children receiving 2nd HIV test following cessation of breastfeeding from 13% Sept 2015 to 80% Aug 2016; access to baseline CD4 test among children enrolled into HIV care improved 40% Sept 2015 to 100% Aug 2016.

Activity 6. Work with MOHCDGEC and IPs to improve safety, increase quality and the level of integration of Voluntary Medical Male Circumcision services

OVERVIEW

ASSIST is collaborating with MOHCDGEC and IPs in applying modern improvement approaches to strengthen the delivery of safe, high-quality, and integrated VMMC and early infant male circumcision (EIMC) services. In FY16, ASSIST provided technical support to providers on assessing changes to optimize compliance to the global male circumcision standards. CHMTs are being supported to set up site QI teams that routinely conduct reviews of work processes to assess and document the extent to which circumcision clients receive a package of services that are in compliance with global standards.

KEY ACCOMPLISHMENTS AND RESULTS

- **ASSIST conducted coaching and mentoring to 55 VMMC QA/QI sites in priority districts of Tabora, Iringa, Shinyanga, Njombe, and Mbeya** (January, May, and June 2016).
- **ASSIST conducted quarterly follow-up compliance assessments to VMMC standards in all five regions.** The periodic assessments show a significant improvement in adherence to circumcision standards compared to the baseline values (**Table 10**).

Table 10. Tanzania: VMMC dashboard for key indicators, 10 sites, Njombe Region (Nov 2015 – June 2016)

Second Assessment November, 2015										Third Assessment May to June, 2016							
	Health unit	Mgt	Supplies	Reg	Ind	MC	M&E	IPC	Overall	Mgt	Supplies	Reg	Ind	MC	M&E	IPC	Overall score
1	Kibena RH	80	100				92		90	90	100	83	94	90	97	92	92
2	Anglican HC	80	66	50	58	77	0	42	55	80	83	83	89	95	85	85	81
3	Makete DH	70	50	100	83	90	73	83	74	80	83	83	83	90	85	90	86
4	Matamba HC	30	67	50	67	90	64	69	63	80	100	80	83	80	44	77	77
5	Ipelele HC	30	100	83	50	65	64	17	54	80	83				69	69	74
6	Lupembe HC	60	67				71	92	74	80	83	75	67	80	44	69	71
7	Ludewa Hosp	60	83	83	88	100	64	77	73	80	67	50	56	90	92	77	87
8	Mlangali HC	50	67	80	66	67	79	92	83	30	67				84	100	74
9	Manda HC	40	83				85	87	74	90	83				62	77	76
10	Wanging'ombe HC	90	100	83	83	70	100	83	81	70	83	50	84	70	85	69	73
11	Ilebula Hosp	90	83	100	83	90	85	92	89	100	67	100	83	80	92	92	86
12	Makambako Hosp	70	83	100	88	73	85	85	81	70	83	100	83	87	100	77	85

Iringa Region

- **ASSIST in collaboration with R/CHMTs and the regional IP conducted the first learning session with 31 health workers from 11 QI teams** (March 2016). Participants were supported to improve VMMC care by developing improvement plans to bridge the gaps in: identification and recording of moderate and severe adverse events, increasing the proportion of clients coming back for 7-day follow-up, and providing effective linkage between VMMC HIV-positive clients and CTC.
- **ASSIST supported development of EIMC CQI tool and piloted in four sites in Iringa Region** (June-September 2016).

Tabora Region

- **Conducted external quality assessment in four VMMC sites (Urambo DH, Nzega DH, Kitete RH and Igunga DH)** (Jan 25-28, 2016). The best practices identified included availability of most of the relevant guidelines and SOPs as well as proper management of VMMC commodities to avoid stock-outs and expiry of drugs.
- **ASSIST conducted a learning session with 22 participants from four QI teams** (April 12-14, 2016).

Mbeya Region

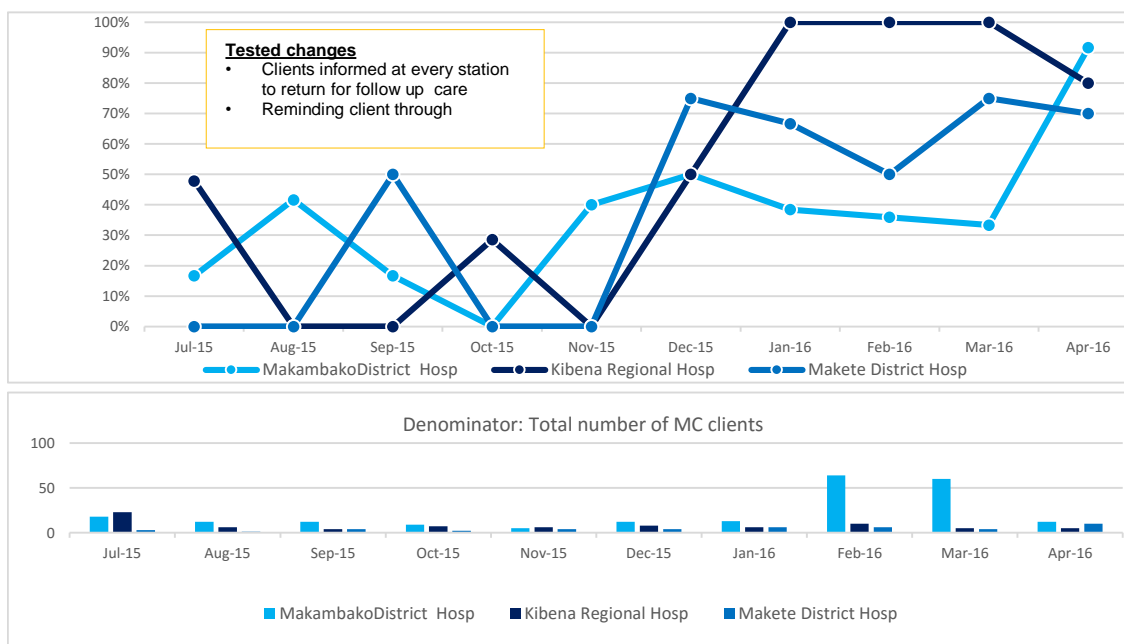
- **ASSIST conducted a learning session with 16 QI teams** (April 26-29 2016).

Njombe Region

- **ASSIST supported facility VMMC QI teams who were coached on testing interventions to bridge the identified gaps and monitoring progress using indicator dashboard** (May 2016).

- **Results:**
 - Significant improvements were noted in compliance to VMMC standards, for example, compliance to management standards in Njombe improved from 62% in November 2015 to 77% in May 2016 while compliance to the supply management standard improved from 80% to 87% in May 2016 for all 12 sites in Njombe.
 - Almost all clients came back for the first follow-up visit (48 hours), but very few for the second (7 days) follow-up (**Figure 73**). Messages about the importance of follow-up were only given by a counsellor. In order to increase the number of clients coming for the second follow-up visit, the messages were given at every step in the client flow and clients were reminded about the appointment a day before.

Figure 73. Tanzania: Percentage of male circumcision clients returning for 7-day follow-up visit at Makambako, Kibena, and Makete hospitals, Njombe Region (Jul 2015 – April 2016)



- **ASSIST participated in conducting the PEPFAR-led VMMC External Quality Assurance and Sustainability Assessment in Iringa, Njombe and Tabora regions and supported R/CHMTs to develop sustainability improvement plans** (Jan 25-28, 2016). Although Iringa and Njombe regions have reached the saturation phase of VMMC implementation, implementation of VMMC services is still vertical and is not self-sustained.
- **ASSIST supported a workshop to finalize development of VMMC CQI and health facility assessment tools. Standards on Leadership and Sustainability targeting the top management of the health facilities/CHMTs were added to the CQI tool** (April 18-22, 2016).

Activity 7. Work with MOHCDGEC and IPs to improve quality of HIV rapid testing

OVERVIEW

Tanzania is committed to achieve the UNAIDS/PEPFAR 90-90-90 targets by 2020, while scaling up the Test and Treat Strategy for those found to be HIV-positive. HTC approaches target identification and support of individuals with greatest needs and risk of HIV infection by ensuring the quality of HIV rapid testing is adhered to and address common service delivery issues regarding HIV rapid testing in points of care. In FY16 the USAID Mission in Tanzania invited ASSIST to support the MOHCDGEC and IPs through building capacity on applying improvement science to accelerate HTC to meet desired targets in one saturation district in the region of Dodoma.

KEY ACCOMPLISHMENTS AND RESULTS

Dodoma Region

- **ASSIST supported Dodoma Region IPs, together with R/CHMTs and service providers from 16 health facilities in Dodoma Municipal Council to do pre-work assessing the quality of HTC and service uptake for PMTCT, pediatric and adult ART** (Dec 2015). This helped determine performance gaps that will be addressed through application of improvement techniques including patient centered care to achieve improvement. During pre-work assessment the following gaps were identified: poor compliance of counselling and testing standards, poor compliance with safety, poor documentation and utilization of HIV registers and logbooks, no internal quality control assessment no laboratory comparison of HIV test results in most of visited sites.
- **ASSIST also supported first learning sessions of R/CHMT and facility QI teams to empower them on relevant QI competencies where participants managed to do process analysis and develop improvement actions plans** (Jan 2016). ASSIST also conducted follow-up coaching and mentoring to monitor and evaluate the functionality of QI teams (Regional, Municipal and Facility), the implementation of developed plans, and compliance to HTC services delivery standards to health care providers working in HTC, ART and PMTCT in high-volume health facilities.
- **ASSIST supported 3 RHMT, 5 CHMT, and 145 health care workers from 16 facilities to conduct HTC QA baseline assessment to measure compliance in the areas of leadership and management, environment and supplies, group education and IEC, individual HTC, infection prevention practices, monitoring and evaluation** (Dec 2015).
- **ASSIST conducted a learning session with 4 RHMT, 4 CHMT, and 33 QI teams from Dodoma Municipal's 16 sites on QI approaches for improving the processes in HTC/rapid test use, ART, and PMTCT services** (January 2016). ASSIST also supported the R/CHMT and QI teams to develop plans that will address the gaps identified during the pre-work assessment focusing on increasing access, retention, adherence, and follow-up of client's wellbeing.
- **ASSIST conducted follow up coaching and mentoring to 2 RHMT, 2 CHMT, and 119 health workers on how to track and document QI indicator data and improvement changes on improving the processes in HTC/rapid test use, ART, and PMTCT services** (March 2016).
- **Tested changes included:** R/CHMT supervision and mentoring implementation plan; provision of PITC registers in all client entry points; provision of HTC guidelines and SOPs in all testing sites; sensitization of clinicians to perform PITC during normal services provision; distribution of roles and responsibilities to QI team members; development and distribution of checklists to all facilities for tracking the quality of rapid testing; and including QI activities in the agenda in the weekly meeting for both R/CHMT and facility.

Results:

- Increased leadership commitment on QI improvement activities.
- Availability of all essential HIV supplies and equipment like PITC register, ART registers, mother-child follow-up registers, HIV log books, and test kits in all HIV service delivery points.
- Introduction and implementation of PITC services at each client entry point.
- Increased access to HIV counselling and testing among clients attending the facility from 18% during baseline assessment in December 2015 to 26% in March 2016.
- Increased access to HIV counselling among children under 15 years admitted in pediatric ward from 16% in December 2015 to 55% in March 2016.
- Increased number of clients enrolled to care each month.
- Availability of SOPs and guidelines in all HIV service delivery area.
- Involvement of clinicians in PITC services.
- Tracking of missed appointment clients and bring them to care using the HBC providers.
- **ASSIST supported a learning session for 30 members of the Dodoma Municipal CHMT leadership to build their capacity to supervise and coach facility members on QI approaches** (May 10-12, 2016). Following the learning session (from May 16-20, 2016), ASSIST, with 4 CHMT members, conducted coaching and mentoring to 40 health care workers on how to

track and document improvement and identification and testing changes to improve the quality of rapid HIV testing at the point of care.

- **Rapid Testing QI Initiative in 22 scale-up saturation districts.** Through a request from USAID, CDC and DOD, ASSIST is supporting Rapid Testing for QI Initiatives for improving the quality of HIV rapid testing at point of care in the 27 ART scale-up districts. The baseline audit was conducted to 485 rapid HIV testing points in 204 health facilities among 22 PEPFAR scale up saturation districts from (July 1-Sept 17, 2016). Results showed:
 - 47.9% of testing points needs improvement in specific areas to be ready for national site certification [Level 1]
 - 35.6% of testing points needs improvement in all areas and immediate remediation for them to be considered for national site certification [level 0]
 - 15% of testing points were partially ready for national site certification [Level 2]
 - Only one percent of testing points were close to national site certification [Level 3]
 - Under one percent (0.4%) of testing points are eligible for national site certification [Level 4]

Activity 8. Support MOHCDGEC and IPs to improve continuum of care and retention of PLHIV through strengthening of linkages between community and facility actors

OVERVIEW

In FY15, ASSIST was requested to support the MOHCDGEC and IPs to design and test models of strengthening community systems to improve access, adherence, and retention to ART. In FY16, ASSIST continued this work, improving the continuum of care and retention of PLHIV including MVC through strengthening of linkages between health facility and community systems. This has strengthened coordination, communication, and collaboration of facility and community actors, facilitating seamless care link from HTC to ART for all HIV+ clients. To ensure ownership, ASSIST supported R/CHMTs and IPs to provide continuous capacity building to community and facility QI teams in ensuring MVC are identified and linked to HIV service from testing, enrolment to care, and retention in ART.

KEY ACCOMPLISHMENTS AND RESULTS

Njombe Town Council

- **ASSIST worked with the RHMT and CHMT to facilitate the formation of 14 QI teams** through bringing together existing structures in the village such as MVCC, Facility Health Committees, Local Government Authorities (LGAs), CSOs, PLHIV groups, and Savings and Credit groups, to act as change agents and advocates at community for identification and linking MVC to health facility and other social services. MVCCs were revived and supported to develop work plans on identification and linkage of MVCs and adolescents to care (Nov 13-14, 2015).
- **A total of 99 members from 13 out of 14 community QITs were supported to review their performance in implementation of various changes.** Teams had conducted various awareness meetings on HIV issues which resulted in a total of 155 (75 female and 80 male) community members out of 351 (169 female and 182 male) testing for HIV in all 13 villages. A total of 68 community members were found HIV-positive, and 44 (23 female and 21 male) were enrolled to ART (March 7-18, 2016).
- **Coaching and mentoring was done with 9 community QITs with 77 members to strengthen their capacity in identifying, supporting, and linking MVC to HIV and social services** (June 27-July 8, 2016). Teams have engaged with facility staff to conduct sensitization on voluntary HIV testing targeting MVC households. By August 2016, 111 (47%) vulnerable children (52 female, 59 male) out of 245 had tested for HIV, 11 (9%) tested positive (4 female and 7 male), and 10 (91%) were linked and enrolled into care.

Mufindi District Council

- **Coaching and mentoring was conducted with 200 participants from 18 village QITs from four wards** (Malangali, Idunda, Ihowanza, and Mbalamaziwa) (Nov 4-13, 2015). The focus was improving access of MVC and adolescents to HIV and social services. For example, in Mwilavila village, the QI team managed to convince 28 people, including 3 MVC, to access voluntary testing and counselling services at Malangali HC. In Itengule village, the HBC (who is also part of

QIT) has mobilized a total of 6 PLHIV to join the existing PLHIV group; and supported two children to be enrolled to care. Teams are collaborating with different available community stakeholders in supporting MVC with services such as education and scholastic materials, food, and clothes.

- **Coaching was conducted from to strengthen their capacity to identify and link MVC to HIV services** (April 3-16, 2016).
- **Results:** HTC among MVC in 9 villages increased from 37 (8 female, 29) (6%) out of 571 MVC in May 2015 to 93 (female 34, 59 male) (12%) out of 758 MVC in March 2016. Enrollment to care for those found HIV-positive increased from 15% May 2015 to 52% March 2016.

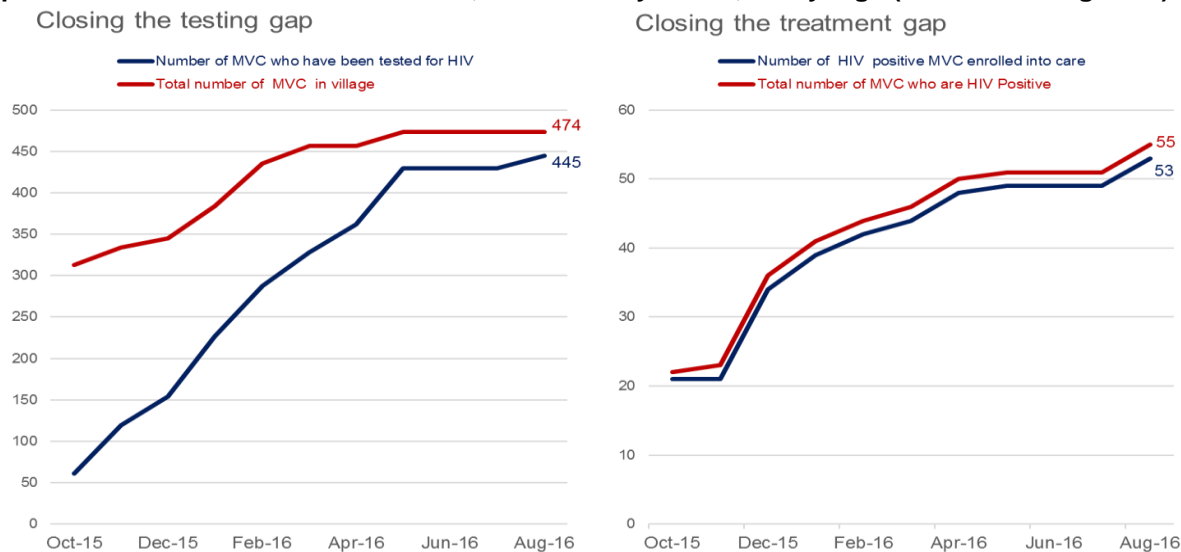
Mafinga Township Council and Kahama District Council

- **ASSIST, with CHMT, held an orientation session on supporting MVC and adolescents in accessing HIV and other social services with 5 community QITs in Kinyambo ward** (May – July, 2016). Teams identified 143 MVC and adolescents with a high index (those born to or living with HIV-positive parents or caregivers), among whom: 4 (3 female, 1 male) (3%) tested positive for HIV and were enrolled in care; 4 MVC (2 female, 2 male), were linked to nutritional services; and 6 MVC (4 female, 2 male) were linked to education services. Also 3 MVC were reunited with their families, while 3 (1 female, 2 male) received legal support. Teams also tracked back 6 (4 female, 2 male) lost to follow-up clients (PLHIV) and returned them to care.

Shinyanga Municipal Council

- **Baseline data was collected in Shinyanga Municipality in Kambarage ward where a total of 319 MVC were identified by the community QIT, of these, 72 (22.6%) were tested for HIV and 21 tested HIV-positive, with 16 of these being enrolled to CTC** (Nov 2015). Teams continued to identify and analyze gaps in access to care for MVCs.
- **88 members from 6 teams in Kambarage ward were supported to strengthen their capacity in ensuring MVC have access to HIV services** (Feb 2016). Of 391 MVC, 259 have been tested for HIV, and 28 confirmed HIV-positive with 27 of them enrolled into care. Community QITs mobilized resources from community members to support MVC to access various services whereby a total of 160 out of 391 were supported with birth certificates and 157 out of 278 MVC with CHF cards.
- **Coaching and mentoring was conducted to 6 community QI teams to strengthen their capacity in identifying, supporting, and linking vulnerable children to HIV and social services.** A total of 58 team members were oriented on identifying performance gaps and development of improvement plans (August 15 – 20, 2016).
- **Community QI teams in collaboration with Kambarage Health Center conducted three community outreaches for voluntary HIV testing in Kambarage ward targeting vulnerable households** (Aug 3-19, 2016). In this course, 445 (94%), 202 females and 243 males out of 474 vulnerable children tested for HIV, whereby 55 (24 females and 31 males) tested positive and 53 (23 HIV-positive females and 30 HIV-positive males) were linked and enrolled into care (**Figure 74**).

Figure 74. Tanzania: Increasing the number of vulnerable children for HIV and enrolling HIV-positive vulnerable children into care, 6 community teams, Shinyanga (Oct 2015 – Aug 2016)



Activity 9. Support MOHCDGEC and IPs to improve quality of integrated PMTCT services in MNCH settings

OVERVIEW

Global access to ART among pregnant women in need is lower than access among adults in the general population (34% vs. 47% in 2010). Low access to ART services among pregnant women has been attributed to the fact that PMTCT and ART services have been delivered separately in a vertical fashion, being poorly integrated with regard to their location, providers, and timing. The integration of PMTCT and ART at Reproductive and Child Health (RCH) settings has contributed to increasing ART uptake among pregnant women, keeping mothers alive, and reducing chances for new HIV infection among exposed children. In FY16, ASSIST applied improvement approaches to strengthen integration of PMTCT and RCH services in three regions with focus on PEPFAR scale-up districts. Working with the IP, RHMTs, and CHMTs in the regions, we defined a minimum package of PMTCT services for integration into and RCH, including HTC, EID, FP, TB, and HIV care. Others included MNCH care that all women and children should receive at every clinic visit. The integration of PMTCT services in MNCH settings contributes to the first two 90-90-90 targets (90% of all people living with HIV know their HIV status and 90% of all people with diagnosed HIV infection receive sustained ART by 2020, respectively).

KEY ACCOMPLISHMENTS AND RESULTS

Rukwa Region

- **ASSIST, with 2 members of the RHMT, 4 CHMT members, and the regional IP, conducted coaching and validation of QI data in 10 high-volume sites of Sumbawanga Municipal and Sumbawanga DC (July 10-22, 2016).**
- **ASSIST conducted learning sessions in Rukwa Region (Feb 2-4, 2016).** It involved 47 participants (1 Program Officer from HJFMRI-Walter Reed Program, 3 RHMT members, 10 CHMT members, and 33 health care providers from 12 facilities).
- **Conducted coaching and mentoring on QI for PMTCT and MNCH services integration in 10 high-volume sites in Rukwa Region (July 2016).** During the coaching, 49 health care workers and 2 RHMT members, 4 CHMT members, and 1 IP staff were reached.
- **Results:**
 - During the visit some improvements were noted. HIV testing among children at OPD and IPD increased from 5% in January 2015 to 59% in June 2016 and 33% in January 2015 to 64% in June 2016, respectively.

- Isoniazid Preventive Therapy (IPT) among HIV-positive children increased from 0% Jan 2015 to 17% in June 2016.
- Indicator data validation was conducted in 8 high-volume sites and is undergoing analysis.
- Data accuracy for women attending first family planning tested for HIV was 83%. Kizwite QI team had difficulty in understanding the definition of numerator and denominator. They could not explain where they obtained the figures.
- Data accuracy for HIV-exposed children receiving second test was 100% in 8 facilities in Rukwa Region.

Ruvuma Region

- **ASSIST, with the RHMT, conducted a QI learning session for experience sharing among 16 high-volume sites in Ruvuma Region** (Aug 22-27, 2016). 55 health care workers and 2 IP staff attended the session.
- **ASSIST staff conducted coaching and mentoring visit to QI teams in Ruvuma Region.** The coaching visit reached 8 health facilities from Songea MC and Mbinga DC. During the coaching visit, performance improvement results from facilities implementing integrated PMTCT services into MNCHs setting were compared with the results from 2 control sites (March 14-23, 2016).
 - TB screening for HIV-positive pregnant and breastfeeding women increased from 71% in Oct 2014 to 100% in July 2016.
 - HIV-positive pregnant and lactating women initiating ART increased from 72% in Oct 2014 to 100% in July 2016.
 - HIV-exposed children receiving second HIV test six weeks after weaning increased from 38% in Oct 2014 to 100% in July 2016.
 - % of children tested for HIV at pediatric inpatient ward increased from 14% in Oct 2014 to 48% in July 2016.
 - % of new women attending FP clinic tested for HIV increased from 16% in Jan 2015 to 79% in July 2016.
 - % of children tested for HIV at RCH increased from 0% in Jan 2015 to 28% in July 2016.
 - % of HIV-positive women of reproductive age receiving FP methods increased from 5% in January 2015 to 72% in July 2016.
 - Results from the comparison study showed that HIV testing uptake among women attending FP clinic and FP uptake among HIV+ women at CTC was higher in intervention sites compared to control sites with difference in differences of 41% and 40%, respectively, comparing data in Feb 2016 with that of Jan 2015.

IMPROVEMENT IN KEY INDICATORS

Activity	Indicators	Baseline	Oct – Dec 2015	Jan – Feb 2016	Mar – May 2016	Most Recent
Strengthen the capacity of the MOHCDGEC and IPs to continuously improve the quality of PMTCT care and support scaling up of PMTCT	% of pregnant women who bring their male partners and tested and counselled for HIV at RCH					
	Dar es Salaam and Pwani)	3% (Apr 2015, 10 sites)	26% (Nov 2015, 11 sites)	28% (Feb 2016, 5 sites)	21% (Apr 2016) (6 sites)	36% (June 2016, 8 sites)
	Morogoro	14% (Sep, 2014) 2 sites	39.1% (Dec, 2015) 7 sites	35.3 % (Feb, 2016) 6 sites	45.7 % (May, 2016) 5 sites	82 % (Aug, 2016) 5 sites
	Dar es Salaam and Pwani	17% (Apr 2015, 10 sites)	56% (Oct 2015, 11 sites)	23% (Feb 2016), 5 sites	28% (April 2016) 6 site)	33% (June 2016, 8 sites)

Activity	Indicators	Baseline	Oct – Dec 2015	Jan – Feb 2016	Mar – May 2016	Most Recent
Option B+	Morogoro	14% (Sep, 2014) 2 sites	39.1% (Dec, 2015) 7 sites	35.3 % (Feb, 2016) 6 sites	45.7% (May, 2016) 5 sites	36% (June 2016, 8 sites)
	Njombe	17% (May 2014, 6 sites)	19% (Oct 2015, 6 sites)	29% (Feb 2016, 6 sites)	--	--
% of HIV-exposed children testing for 1st PCR within 4-6 weeks						
	Dar es Salaam and Pwani	53% (Apr 2015, 11 sites)	75% (Dec 2015, 7 sites)	53% (Feb 2016, 5 sites)	78% (April 2016, 11 sites)	82% (June 2016, 8 sites)
	Morogoro	30%(Jan 2015 9 sites)	53% (Dec 2015, 9 sites)	63% (Feb 2016 9 sites)	77% (Apr 2016 10 sites)	87% (Aug 2016, 8 sites)
	Njombe	29% (May 2014, 6 sites)	57% (Oct 2015, 6 sites)	59% (Jan 2016, 6 sites)	72% (Apr 2016, 11 sites)	78% August 2016 6 sites
% of HIV-positive mother-baby pairs attending HIV service each month						
	Nzega DC	0% (Apr 2013, 10 sites)	100% (Dec. 2015, 10 sites)	92% (Feb. 2016, 10 sites)	97% (Mar 2016, 10 sites)	97% (June 2016 10 sites)
	Mufindi	0% (June 2013, 10 sites)	91% (Sept 2015, 10 sites)	92% (Feb 2016, 10 sites)	95% (Mar 2016 10 sites)	95% (March 2016 10 sites)
	Mbeya CC	18% (June 2013, 10 sites)	91% (Dec 2015, 10 sites)	91% (January 2016)	91% (February 2016)	92% (March 2016)
	Dar es Salaam and Pwani	15% (Dec, 2015) 3 sites	15% (Dec, 2015) 3 sites	16% (Feb, 2016) 5 sites	78% (April, 2016) 5 sites	65% (June, 2016, 4 sites)
	Morogoro	46% (Sept 2014, 8 sites)	80%(Mar 2015, 8 sites)	82% (Feb 2016 8 sites)	86% (Mar 2016, 9 sites)	98% (Aug 2016, 6 sites)
% of HIV-exposed children receiving second HIV test 6 weeks after cessation of breastfeeding						
	Dar es Salaam and Pwani	25% (Apr 2015, 7 sites)	51% (Oct. 2015, 9 sites)	79% (Feb 2016, 6 sites)	79% (Apr 2016, 5 sites)	88% (June, 2016) 4 sites
	Morogoro	14% (May, 2015, 3 sites)	63% (Dec 2015, 2 sites)	35% (35, Jan 2016) 7 sites	31% June, 2016) 6 sites	67% (Aug, 2016) 6 sites
	Ruvuma	13% (Jan 2015, 11 sites)	84% (Dec 2015, 6 sites)	71% (Feb 2016, 6 sites)	71% (Feb 2016, 6 sites)	100% (June 2016, 13 sites)
% of pregnant women tested and counselled for HIV during the ANC period						

Activity	Indicators	Baseline	Oct – Dec 2015	Jan – Feb 2016	Mar – May 2016	Most Recent
	Korogwe, Muheza and Tanga City	65% (Aug 2015, 11 sites)	68% (Oct 2015, 11 sites)	85% (Jan 2016, 11 sites)	100% (May 2016, 11 sites)	100% (May 2016, 11 sites)
% of HIV-positive pregnant receiving at least one CD4 count during pregnancy						
	Iringa	16% (Jan 2011, 11 sites)	44% (Jan 2012 10 sites)	23% (Jan 2013, 11 sites)	73% (Dec 2013 5 sites)	73% (Dec 2013 5 sites)
% of new HIV-positive pregnant and breastfeeding women screened for TB						
	Ruvuma	82% (Jan 2015, 11 Sites)	100% (Dec 2015, 6 Sites)	100% (Feb 2016, 5 Sites)	100% (May 2016, 6 Sites)	100% (June 2016, 10 sites)
% of HIV-positive mothers at RCH practicing exclusive breastfeeding						
	Nzega	33% (April 2013, 10 sites)	85% (Dec 2015, 10 sites)	98% (Feb 2016, 10 sites)	99% (Apr 2016 10 sites)	97% (June 2016 10 sites)
	Mufindi	51% (April 2013, 10 sites)	95% 9 Dec 2015, 10 sites)	100% (Feb 2015, 10 sites)	97% (March 2016, 10 sites)	100% (February 2016)
	Mbeya	67% (June 2013, 10 sites)	95% (Sep 2015, 10 sites)	93% (Nov 2015)	95% (Jan 2016)	97% (Mar 2016 10 sites)
% of HEI started on ARV prophylaxis within 12 hours after birth						
	Magu	43% (Oct 2013, 11 sites)	52% (Sep 2014, 25 sites)	95% (Apr 2015, 23 sites)	95% (Apr 2015, 23 sites)	95% (April 2016, 23 sites)
% of post-natal mothers who attend four standard visits (2, 7, 28 and 42)						
	Nzega	0% April 2013 (10 Sites)	99% (Dec 2015, 10 sites)	91% (Jan 2016, 10 Sites)	91% (Mar 2016, 10 sites)	100% (June 2016)
	Mufindi	0% (June 2013, 10 Sites)	52 (Dec 2015, 10 Sites)	100% (Feb 2016, 10 Sites)	100% (February 2016)	100% (February 2016 10 sites)
	Mbeya	14% (June 2013, 10 Sites)	93% (Sept 2015, 10 sites)	93% (Sept 2015, 10 sites)	93% (Sept 2015, 10 sites)2	61% (March 2016 10 sites)
% of pregnant women making 4 antenatal visits						
	Iringa	20% (Jan 2011, 10 sites)	59% (Dec 2011, 10 sites)	60% (Jan 2013, 8 sites)	63% (Dec 2013, 2 sites)	63% (Dec 2013, 2 sites)

Activity	Indicators	Baseline	Oct – Dec 2015	Jan – Feb 2016	Mar – May 2016	Most Recent
	% of HIV+ patients who are keeping appointment					
	Morogoro	68% (Oct 2015, 3 sites)	74% (Dec 2015, 3 sites)	62% (Feb 2016, 5 sites)	72% (May 2016, 5 sites)	79% (July, 2016) 5 sites
	% HIV-positive pregnant and breast feeding women currently (actively) on ART					
	Nzega	13% (May 2013, 10 sites)	88% (Dec 2015, 10 sites)	91% (Jan 2016, 10 sites)	87% (Mar 2016, 10 sites)	92% (June 2016, 10 sites)
	Mufindi	0% (June 2013, 10 sites)	93% (Sept 2015, 10 sites)	99% (Jan 2016, 10 sites)	100% (February 2016, 10 sites)	100% (February 2016, 10 sites)
	Mbeya	5% (June 2013, 10 sites)	88% (Dec 2015, 10 sites)	89% (Mar 2016, 10 sites)	89% (Mar 2016, 10 sites)	89% (March 2016, 10 sites)
	% of HIV-positive pregnant and lactating women receiving nutritional counselling					
	Nzega	0% (Oct 2013, 10 sites)	93% (Dec 2015, 10 sites)	93% (Dec 2015, 10 sites)	99% (Mar 2016, 10 sites)	98% (June 2016, 10 sites)
	Mufindi	0% (Oct 2013, 10 sites)	99% (Dec 2015, 10 sites)	100% (Feb 2016, 10 sites)	100% (Feb 2016, 10 sites)	100% (February 2016, 10 sites)
	Mbeya CC	5% (June 2013, 10 sites)	100% (Dec 2015, 10 sites)	93% (Mar 2016, 10 sites)	93% (Mar 2016, 10 sites)	93% (March 2016, 10 sites)
	% of HIV-positive pregnant and post-natal women who are malnourished					
	Nzega	0% (June 2013, 10 sites)	3% (Dec 2015, 10 sites)	1% (Jan 2016, 10 sites)	1% (Mar 2016, 10 sites)	1% (June 2016, 10 sites)
	Mufindi DC	0% (June 2013, 10 sites)	3% (Sept 2015, 10 sites)	0% (Feb 2016, 10 sites)	0% (Feb 2016, 10 sites)	0% (Feb 2016, 10 sites)
	Mbeya CC	0% (June 2013, 10 sites)	1% (Dec 2015, 10 sites)	2% (Mar 2016, 10 sites)	2% (Mar 2016, 10 sites)	2% (March 2016, 10 sites)
	% of infants below 12 months who are malnourished					
	Nzega	14% (Aug 2013, 5 sites)	2% (Dec 2015, 5 sites)	2% (Jan 2016, 5 sites)	1% (Mar 2016, 5 sites)	1% (June 2016, 10 sites)
	Mufindi	33% (June 2013, 5 sites)	2% (Dec 2015, 5 sites)	1% (Feb 2016, 5 sites)	1% (February 2016, 10 sites)	1% (February 2016, 10 sites)
	Mbeya	33% (Jan 2014, 5 sites)	1% (Dec 2015, 5 sites)	1% (Mar 2016, 5 sites)	1% (Mar 2016, 5 sites)	1% (March 2016, 10 sites)

Activity	Indicators	Baseline	Oct – Dec 2015	Jan – Feb 2016	Mar – May 2016	Most Recent
	% of clients assessed and categorized for nutritional status each clinic day					
	Mbeya DC	29% (Dec 2015, 5 sites)	29% (Dec 2015, 5 sites)	48% (Feb 2016, 5 sites)	48% (May 2016, 5 sites)	51% (July 2016, 5 sites)
	% of malnourished clients who are treated for MAM or SAM					
	Mbeya DC	34% (Dec 2015, 5 sites)	34% (Dec 2015, 5 sites)	90% (Feb 2016, 5 sites)	86% (May 2016, 5 sites)	65% (July 2016, 5 sites)
Support the MOHCDGEC, IPs, and local structures to strengthen quality of care, support and protection to most vulnerable children through improvement approaches	% of MVC with access to Community Health Fund					
	Bagamoyo District	0% (May 2011, 25 sites)	23% (Dec 2015, 25 sites)	23% (Feb 2016, 25 sites)	23% (Feb 2016, 25 sites)	23% (Sept 2016, 25 sites)
	% of MVC with birth certificates					
	Bagamoyo District	6% (May 2011, 25 sites)	74% (Dec 2015, 25 sites)	74% (Feb 2016, 25 sites)	74% (Feb 2016, 25 sites)	74% (September 2016, 6 sites)
	% of MVCs who have been tested for HIV					
	Shinyanga MC	23 % (Oct 2015, 7 sites)	45% (Oct-Dec 2015, 7 sites)	66% (Feb 2016, 7 sites)	91% (May 2016, 7 sites)	94% (Sept 2016, 6 sites)
Njombe	3% May 2014, 6 sites	28% (Dec 2015, 6 sites)	17% February 2016, 6 sites	17% (February 2016)	47% (Sept, 2016, 9 sites)	
Work with MOHCDGEC and IPs to improve safety, increase quality and the level of integration of Voluntary Medical Male Circumcision services	% of VMMC clients who come for 48-hour follow-up visit					
	Iringa	94% (July 2015, 11 sites)	99% (Oct. 2015, 7 sites)	99% (Oct. 2015, 7 sites)	100% (April 2016, 11 sites)	100% (April 2016, 11 sites)
	Njombe	-	-	-	100% (Apr 2016, 10 sites)	100% (Apr 2016, 10 sites)
	Tabora	82% (July 2015, 4 sites)	89% (Oct 2015, 4 sites)	93% (Feb, 2016, 4 sites)	85% (April, 2016, 4 sites)	85% (April, 2016, 4 sites)
	Shinyanga	100% (Jul 2015, 13 sites)	100% (Oct 2015, 13 sites)	-	100% (Apr 2016, 8 sites)	100% (Apr 2016, 8 sites)
	% of VMMC clients who come for 7-day follow-up visit					
	Shinyanga	63% (July 2015, 13 sites)	71% (Oct 2015, 13 sites)	71% (Oct 2015, 13 sites)	69% (Apr 2016, 8 sites)	69% (Apr 2016, 8 sites)
	Njombe	-	-	-	59% (Apr 2016, 10 sites)	59% (Apr 2016, 10 sites)
Tabora	47% (July 2015, 4 sites)	62% (Oct 2015, 4 sites)	72% (Feb 2016, 4 sites)	85% (Apr 2016, 4 sites)	85% (Apr 2016, 4 sites)	

Activity	Indicators	Baseline	Oct – Dec 2015	Jan – Feb 2016	Mar – May 2016	Most Recent
Support the MOHCDGEC and IPs to improve access to testing and linkage to HIV/AIDS care and services for infants and children under 15 years	% of children <15 years tested for HIV at pediatric inpatient wards					
	Njombe	7% May 2014, 1 sites)	27% (Oct 2015, 6 sites)	39% (Feb 2016, 8 sites)	55% (May 2016, 6sites)	August 16 59% 4 sites
	Ruvuma	14% (Oct 2014, 8 sites)	27% (Oct. 2015, 6 sites)	43% (Feb 2016, 3 sites)	71% (May 2016, 2 Sites)	48% (July 2016, 11 facilities)
	Rukwa	33% (Jan 2015, 10 sites)	34% (Dec 2015, 10 sites)	43% (Feb 2016, 8 sites)	54% (Feb 2016, 8 sites)	64% (June 2016, 10 sites)
	Morogoro	36% (Feb, 2015, 7 sites)	28% (Dec 2015, 7sites)	42% (Feb 2016, 8 sites)	53% (May 2016, 5 sites)	81% (Aug, 2016, 2 sites)
	% of HIV-infected infants and children < 15 years enrolled into care and started on ART treatment					
	Morogoro	0% (Jan. 2015, 10 sites)	100% (Dec. 2015, 10 sites)	100% Feb 2016, 10 sites)	100% (May 2016, 10 sites)	100% (Aug, 2016) 5 sites
	% of HIV-infected infants and children < 15 years currently on ART at the end of the reporting period					
	Njombe	67% (May 2014, 12 sites)	70% (Dec 2015, 12 sites)	March 68% (Jan 2016, 11 sites)	72% (June 2016, 12 sites)	67% (May 2014, 12 sites)
	Morogoro	65% (May 2014, 6 sites)	93% (Dec 2015, 1 sites)	95% (Feb 2016, 2 sites)	73% (June 2016, 5 sites)	73% (June 2016, 5 sites)
Dar es Salaam/ Pwani	0 % Sept, 2015 (2 sites)	89% (Dec 2015, 2 sites)	79.% (Jan 2016, 5 sites)	93% (Jun 2015, 5 sites)	96% (July2016, 5 sites)	
To support MOHCDGEC and IPs to improve quality of integrated PMTCT services in MNCH settings	% of new women attending FP services tested for HIV					
	Ruvuma	16% (Jan 2015, 8 sites)	38% (Oct. 2015, 7 sites)	54% (Feb 2016, 5 sites)	94% (May 2016, 3 sites)	79% (July 2016, 11 facilities)
	% of new women attending FP services tested for HIV					
	Ruvuma	16% (Jan 2015, 8 sites)	38% (Oct. 2015, 7 sites)	54% (Feb 2016, 5 sites)	94% (May 2016, 3 sites)	79% (July 2016, 11 facilities)
	% of HIV-positive women of reproductive age receiving FP methods					
Ruvuma	5% (Jan 2015, 2 sites)	44% (Dec 2015, 2 sites)	55% (Feb 2016, 2 sites)	64% (May 2016, 2 sites)	72% (July 2016, 10 facilities)	
Morogoro	26% (Jan 2014, 2 sites)	39% (Dec 2015, 3 sites)	43% (Mar 2016, 2 sites)	83% (Aug 2016, 6facilities)	82% (Aug 2016, 5 facilities)	

GENDER INTEGRATION

In FY16, ASSIST continued to support IPs and R/CHMTs to improve gender integration in QI in Morogoro, Njombe, Dar es Salaam, Pwani, and Iringa (Mufindi) regions. Significant improvement was observed in male partners participating in HIV counselling and testing with pregnant women at RCH/PMTCT services, and in percentage of male PLHIV picking FP methods. Moreover, the number of MVC boys (59) tested for HIV was higher than the number of girls tested for HIV (52) in two wards of Njombe Town Council.

In Morogoro Region, three health centres continued to integrate gender in QI by sending invitation letters to male partners, providing extra services like checking BP and weight to male partners who accompanied their pregnant partners, providing health education on male partner involvement at all service delivery points, and providing health education to pregnant mothers on importance of involving their male partners in ANC services. Messages about RCH services were included in village meetings and advocacy activities, e.g., through religious leaders, messages were conveyed to the members of the communities. Such efforts contributed to increasing HIV testing among male partners in PMTCT services, from 15% in September 2014 to 82% in August 2016 (the number of pregnant women whose male partners come to ANC and are tested for HIV each month divided by all pregnant women clients attending in the month).

Sex-disaggregated data are collected for PLHIV of reproductive age receiving FP methods, male partners testing for HIV at RCH/PMTCT, % of MVC tested for HIV, number of MVC with birth certificates, and number of MVC with CHF cards.

There is equal involvement of male and females in QI teams, from selection to implementation, although in some areas more women are involved because the work is voluntary. All participants are equally encouraged to talk during discussions in learning sessions or meetings. During group work there is equal participation. In presentations, men and women take turns. During coaching, QI team members are requested to observe gender in service provision and analyze and work on the gaps.

SUSTAINABILITY AND INSTITUTIONALIZATION

Sustaining improvement gains was enshrined in the design, implementation, and tracking of ASSIST's improvement activities in Tanzania from the start. In this context, ASSIST supported the MOHCDGEC structures at national level to provide leadership to improvement through enabling policies, allocating resources for improvement, and defining the national improvement agenda. During FY16, ASSIST participated actively in the International Conference on Quality Governance in Dar es Salaam which produced a Framework for QI Governance that provides guidance to leaders. Nationally, ASSIST supported updates of tools to support QI (e.g., the National Quality Training Manual and the National OVC QI Guidelines) and conducted a midterm review of the National QI Strategic Plan (2013- 2018). At middle levels, managers (e.g., CHMTs) were capacitated to support frontline personnel such that they allocate time for improvement, analyse work processes, run PDSA cycles, and use routinely collected data to track performance. In addition, CHMTs were encouraged to include QI in the annual work plans.

UGANDA

BACKGROUND

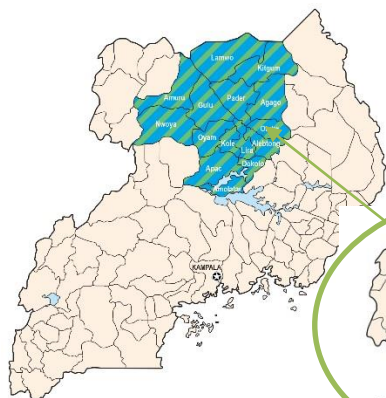
Over the last four years, the USAID ASSIST Project in Uganda has progressed in improving patient outcomes at the facility and community levels for HIV, TB, MNCH, malaria, and OVC services, and at the national and sub national levels, supporting institutionalization of improvement. However, gaps still remain in taking these improvements to scale. In FY16, ASSIST worked to strengthen health systems and improve patient outcomes at facility and community levels in 15 districts of Northern Uganda, in 6 Saving Mothers Giving Life (SMGL) districts in Northern Uganda, and through support to USAID partners nationwide and the Ministries of Health (MoH) and Gender Labour and Social Development (MGLSD).

In Northern Uganda, the project is working in collaboration with the USAID Strengthening Decentralization for Sustainability (SDS) Program to improve the quality of care in 15 districts through strengthening the health system, building technical capacity of human resources, and implementing QI

strategies in HIV prevention, care and treatment, PMTCT, SMC, malaria, TB, MNCH, family planning (FP) and nutrition.

Scale of USAID ASSIST's Work in Uganda

1. ASSIST North Program



MOH, MGLSD,
14 IPs



13 out of 13 regions/
65 out of 112 districts



280 facilities



634 communities



928 QI teams



9.8 million out of 36
million

2. ASSIST North: SMGL Program



3. ASSIST Above Site Technical Assistance

- Maternal and Child Health
- HIV/AIDS (including OVC)

PROGRAM OVERVIEW

What are we trying to accomplish?	At what scale?
SECTION 1: ASSIST North Program for 15 Districts	
1. Strengthened health system in Northern Uganda	
<ul style="list-style-type: none"> • Health facility staff trained to provide quality health services • Availability of essential drugs and supplies in the region • Availability of up-to-date health information in the region 	<ul style="list-style-type: none"> • 137 sites in 15 districts in Northern Uganda
2. Improve prevention of HIV in Northern Uganda	
<ul style="list-style-type: none"> • Improve identification of people with HIV in Northern Uganda 	<ul style="list-style-type: none"> • 8 scale-up districts in Northern Uganda: Agago, Apac, Dokolo, Gulu, Kitgum, Kole, Lira and Oyam
<ul style="list-style-type: none"> • Improve the quality of PMTCT services and contribute towards the elimination of mother to child transmission of HIV 	<ul style="list-style-type: none"> • Highest volume sites in 14 priority districts in Northern Uganda

What are we trying to accomplish?	At what scale?
<ul style="list-style-type: none"> Improve the quality and safety of safe male circumcision (SMC) 	<ul style="list-style-type: none"> All health facilities providing SMC services
<ul style="list-style-type: none"> Improve HIV prevention among key and priority populations and adolescent girls and young women aged 10-24 years by providing them with a standardized package of HIV prevention interventions 	<ul style="list-style-type: none"> Targeting key populations accessing SDS support in Northern Uganda
3. Improve care and treatment for people with HIV	
<ul style="list-style-type: none"> Improve the quality of adult HIV care and treatment services Improve the quality of pediatric HIV care and treatment service 	<ul style="list-style-type: none"> 14 scale-up and sustained response districts of northern Uganda
4. Improve family health (MNCH, family planning, nutrition, Tuberculosis and malaria)	
<ul style="list-style-type: none"> Contribute to reduction of maternal, newborn and child morbidity and mortality. Improve the provision of FP services in Northern Uganda 	<ul style="list-style-type: none"> 50 high volume sites in 15 districts and 87 low volume sites in 15 districts
<ul style="list-style-type: none"> Improve the quality of nutrition services in Northern Uganda 	<ul style="list-style-type: none"> 137 health facilities in the 15 districts in Northern Uganda
<ul style="list-style-type: none"> Improve access to malaria prevention and treatment services for clients seen at health facilities in Northern Uganda Improve TB detection, treatment and outcomes among children and adults in northern Uganda districts 	<ul style="list-style-type: none"> All TB Diagnosis and Treatment Units (DTUs) in 15 Districts
SECTION 2: ASSIST North: Saving Mothers Giving Life (SMGL)	
5. Improve maternal and newborn care through the SMGL initiative	
<ul style="list-style-type: none"> Address the 3 delays associated with maternal and newborn deaths: 1. Seeking appropriate care; 2. Reaching care in a timely manner; and 3. Receiving high quality care at the health facility. 	<ul style="list-style-type: none"> 118 facilities in 6 SMGL phase II districts of Northern Uganda and selected communities
SECTION 3: ASSIST Above Site Technical Assistance	
6. Above site TA to improve prevention of HIV	
<ul style="list-style-type: none"> HIV counseling and testing (HCT): Improve the identification of HIV-positive individuals and link them to care; Link negative clients to preventive services 	<ul style="list-style-type: none"> Selected health facilities in northern, eastern, east central, central and south western Uganda
<ul style="list-style-type: none"> PMTCT: Reduce mother to child transmission of HIV and improve the quality of eMTCT services 	<ul style="list-style-type: none"> 30 health facilities from East, East Central, Central, South western Uganda 117 spread sites in Northern Uganda
<ul style="list-style-type: none"> Support MOH to institutionalize QI in PMTCT services 	National Level
<ul style="list-style-type: none"> Improve the quality and safety of SMC 	<ul style="list-style-type: none"> All regions Districts: 32 out of 112 Health facilities: 93

What are we trying to accomplish?	At what scale?
<ul style="list-style-type: none"> Behavioral Interventions: Improve HIV prevention among key populations and adolescent girls and young women aged 10-24 years by standardizing interventions across USAID, Department of Defense (DoD), and Makerere University Walter Reed Project (MUWRP) IPs 	<ul style="list-style-type: none"> 15 communities in 15 districts with USG 9 IPs 12 Lake Victoria districts, and USAID, DoD, and MUWRP IPs across the country
7. Above site TA to improve care and treatment for people with HIV:	
<ul style="list-style-type: none"> Support MOH to coordinate and institutionalize QI in the health sector 	<ul style="list-style-type: none"> National level, all district level IPs
<ul style="list-style-type: none"> Improve HIV/ART care and treatment services 	<ul style="list-style-type: none"> USAID funded PEPFAR region, 30 health facilities spread across 20 scale up districts in the 3 regions, 8 HFs within 8 sub counties spread across 2 PEPFAR regions
<ul style="list-style-type: none"> Improve quality of Orphans and Vulnerable Children (OVC) services 	<ul style="list-style-type: none"> 3 IPs: (UPHS, Better Outcomes and Sustainable Outcomes projects) Nationally at MGLSD 10 CSOs and 20 villages
8. ASSIST above site TA to improve family health (TB, Nutrition, MNCH)	
<ul style="list-style-type: none"> Improve the quality of maternal newborn health services 	<ul style="list-style-type: none"> Support 3 USAID IPs (STAR E, EC and SW) at 30 health units across the level of health care delivery (RRH, HC IV, HC II and HCII) Support Child Health and Reproductive Health Divisions of the Ministry of Health to improve MNCH work
<ul style="list-style-type: none"> Improve management of TB 	<ul style="list-style-type: none"> 4 USAID funded TB IPs working at 15 health facilities within KCCA and three other PEPFAR region.
<ul style="list-style-type: none"> Improve nutrition in the first 1,000 days for mothers and babies 	<ul style="list-style-type: none"> Southwest, east central and eastern covering 15 health facilities (the RHITES partners)
<ul style="list-style-type: none"> Establish Baby Friendly Health facilities 	<ul style="list-style-type: none"> 6 health facilities (2 in each region)

Improvement Activity
 Cross-cutting Activity

Section 1: ASSIST NORTH

Activity 1. Strengthened health system in Northern Uganda

OVERVIEW

ASSIST is providing direct support to the districts and health facilities to strengthen the health system structures that directly impact quality of service delivery. To improve the quality of service delivery, need-based training and onsite coaching as well as mentorship were conducted throughout the reporting period; HMIS tools were distributed with on-site mentorship done. Facilities, through the

existing support structures, were supported to accurately quantify and submit timely orders for supplies. In partnership with SDS, health units and districts were engaged to strengthen evidence based leadership and management structures through various performance review platforms.

KEY ACCOMPLISHMENTS AND RESULTS

Service Delivery

- **The Site Improvement through Monitoring Systems (SIMS) assessment done this year enabled district and facility teams to understand and bridge gaps in the health system, and service delivery** (April 2016). Major gaps in commodities management, data quality, QI systems and support supervision, were addressed through training and mentorships.
- **Focus on health worker capacity building** improved service delivery which included training of health workers in pediatric TB (1064), integrated management of malaria (572), birth cohort analysis and retention (400), nutrition assessment and counselling (156), pediatric and adolescent HIV (133), biosafety and biosecurity management (129), management of isoniazid preventive therapy (99), new viral load monitoring guidelines (93), gene expert user training (88), Helping Babies Breathe (77), family planning (70), SLMTA (23), lab hub operations (15) and blood transfusion services (5).
- **Set up 13 District QI (DQI) teams who were trained in QI by the Quality Assurance Department of the Ministry of Health** (May 2016).
- **Organized learning avenues to improve and build capacity of health workers in the 16 supported districts.** These included TB quarterly review meetings, hub coordination meetings, district PMTCT cluster meetings and learning sessions (MNCH, TB and HIV).
- **Two northern technical review meetings were held where leaders discussed how to improve the gaps identified during the SIMS assessment, COR and how to achieve the 90-90-90** (Jan and June 2016). In January, the theme was “Consolidating efforts around data quality, lab hubs and MNCH”. In June, the theme was “Improving HIV Care through engaging leadership”. All 15 districts developed action plans to address these gaps and they will be supported to implement these plans.
- **Strengthened inter facility and facility- community referral system during the integrated coaching and mentorship where 137 sites integrated HIV/TB, HIV/FP, nutrition assessment and counselling and PITC care packages at the different service points.**

Health Information

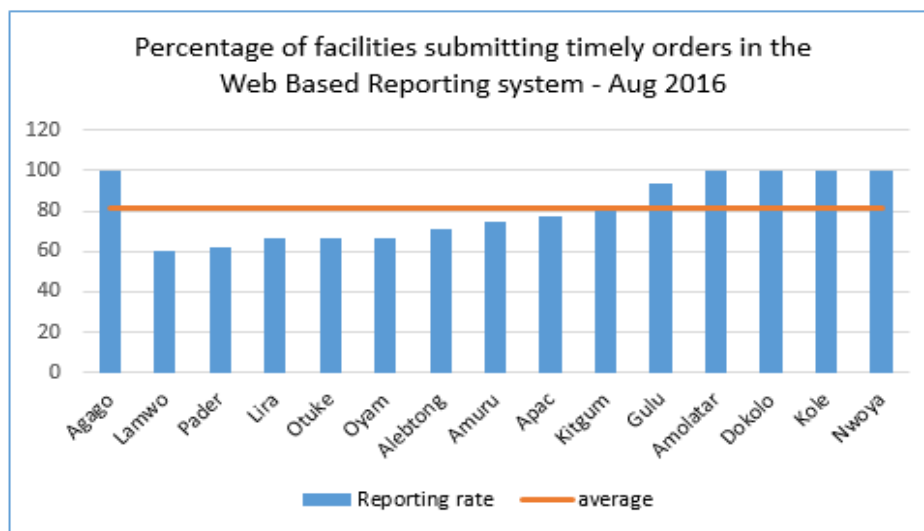
- **Overall, there has been a tremendous improvement in reporting rates, both timeliness and completeness within the Northern Uganda Region this year.**
- **HMIS reporting mentorship was conducted** across the 4 quarters in all supported and non-supported health facilities across 16 districts with focus on completeness and timeliness. Special support was provided to 117eMTCT sites to transfer data on HIV-exposed infants into new EID registers, and arrangement into birth cohorts.
- **HMIS tools were distributed to a total of 259 health facilities.** These were various versions of the revised tools, all aimed at improving patient level data documentation at the facilities. Four rounds of HMIS tools were distributed during the year including registers for all sections such as OPD, Maternity/Antenatal, HIV, Laboratory and other sections.
- **An HIV adolescents’ assessment was conducted in 31 selected facilities located in 12 Northern Uganda districts** to obtain data to support design of priority actions intended to accelerate and improve the quality of the national HIV response among adolescents (10-19 years) (Q3).
- **OpenMRS Assessment was conducted in 49 high-volume sites to ascertain their readiness to take on electronic records management system to improve patient management and as a result 21 staff from high-volume sites trained in OpenMRS use** (Q3).
- **Data management and data validation SOPs were distributed to 137 facilities, to aid report compilation and validation** (Q4). MNCH and HCT data collection guidelines were distributed to all 137 supported sites to ensure proper understanding, correct compilation of the indicators, and reporting.

- **TB data quality support prioritized to identify HMIS data quality gaps from DHIS2.** This was done during a two-day meeting held in Gulu (July 2016).
- **Training in DHIS2 was organized for all the 16 biostatisticians in Northern Uganda including use of dashboards.** They were also supported to ensure that their DHTs have access to DHIS2. In addition, two District Biostatisticians from Lango and Acholi sub regions were facilitated by ASSIST to attend the DHIS2 academy organized in Kampala.
- **Four quarterly data review meetings were organized where all district biostatisticians were on board to identify the data quality gaps in submitted reports** and immediately after, a follow-up activity with was organized to ensure that the errors are rectified and the correct figures updated in DHIS2.
- **Data utilization was strengthened through the district performance review meetings organized to particularly to assess progress against national standards.** Facility staff discussed why there was poor performance in some areas and also came up with solutions to improve the status.

Logistics Management

- **ASSIST supported districts to place orders for N95 and facemasks to CPHL for processing and delivery.** ASSIST also facilitated the redistribution of ARVs, anti TB drugs, HIV test kits and anti malarials in the districts of Nwoya, Kitgum, Lamwo, Otuke, Oyam, Alebtong and Dokolo to avert stock outs and overstocks.
- **The facilities of Ogonyo HCIII, Pajule HCIV, Ogom HCIII, Lira Palwo HCIII, Patongo HCIII and Lukole HCIII received a supply chain training focusing on stock management.** Twenty-seven (27) selected facilities received mentorship and coaching.
- **In a bid to improve service delivery, the project focused on addressing frequent stock outs of essential commodities such as ARVS, ACTS and nutritional products (Q3).** The project responded to acute shortages of HIV and malaria commodities by supporting redistribution within and between districts. The project also worked closely with District Medicines Management Supervisors to build capacity of health workers in forecasting, quantification and timely ordering. Working with districts and the SDS project, ASSIST advised on procurement of basic equipment such as blood pressure, weighing scales, nutrition assessment equipment such as height boards, MUAC tapes.
- **In collaboration with the medicine management supervisors, ASSIST supported health facilities to order ARVs, anti- TB drugs and laboratory commodities.** An average of 81% (111/137) sites ordered and reported on time using the web-based ARV ordering system (WAOS), with 5 districts submitting 100% of their orders on time (**Figure 75**).

Figure 75. Uganda: Percentage of facilities submitting timely medicine orders, 137 sites (Aug 2016)



- **Following the support supervision carried out by the district medicine supervisor of Agago and also using the Option B+ reporting platform**, it was realized that most of the facilities in the district had stock out of ARVS more especially TDF/3TC/EFV due to non-delivery of the item by national medical stores and this necessitated an emergency order. ASSIST supported the quantification of the emergency needs and delivery of the emergency order from NMS to the district, which were delivered on May 27, 2016.

Leadership and Governance

- **On June 16 2016, ASSIST together with the MoH held its 4th Northern Technical Review Meeting for 15 districts in mid-Northern Uganda.** The theme was “Improving HIV Care through Engaging Leadership”. Objectives of this meeting were to reach a consensus on the roles that leaders can play in addressing performance gaps and also through discussions, generate action plans for improving HIV continuum of response.
- **ASSIST conducted a district leadership engagement meeting for the nine MNH spread districts to mobilize support for reduction in newborn deaths** (Aug 2016). Key commitments made by district leaders include improving functionality of Comprehensive Emergency Obstetric and Newborn care (CeMONC), these include HC IVs, revitalizing the MPDR at facility and district levels, strengthening funding for emergency referrals, and improving documentation.
- **ASSIST facilitated the training of 16 facility in-charges from Gulu and Omoro districts on leadership and management** (Q4). Consultants from the Uganda Management Institute facilitated this skills development and training. Topics of discussion included resource management, QI principles and practices, delegation, motivation, leading change, and time management.
- **Following the district leadership commitment to improving HIV care, the leadership in Dokolo District spearheaded the efforts to address gaps in achieving the UNAIDS 90-90-90 targets** (Aug 15-24, 2016). The DHO and two members of DHT accelerated an HIV testing and services (HTS) campaign in five ASSIST supported sites. This activity focused on improving the 1st 90 through reaching out to the high yield population and increase access to viral load testing. In total 1229 individuals received HTS, 33 were positive of whom 24 were linked to care. Of the 1159 ART active clients due for viral load test, 88.2% (1023) accessed a viral load test.

Activity 2. Improve prevention of HIV in Northern Uganda

OVERVIEW

Interventions to diagnose and link new HIV cases to care, PMTCT, and SMC, and other prevention interventions targeting key and priority populations were carried out by ASSIST because effective HIV prevention interventions have been proven to reduce HIV transmission. Activities carried out involved technical support to the facilities during coaching and mentorships.

KEY ACCOMPLISHMENTS AND RESULTS

HIV Counselling and Testing (First 90: People living with HIV will know their HIV status)

- **This year, 457,594 individuals were counselled tested and received their HIV test results, leading to 143% achievement of the annual target (320,313).** The overall prevalence of HIV among those tested during the year was 4% (18,486). This achievement is attributed to the testing efforts that have refocused on high yield groups. A number of efforts were geared towards improving identification of HIV positives, linking these into care and improving the quality of HTC services.
- **Provider Initiated Counselling and Testing (PITC):** Through monthly coaching, facilities have been supported to implement PITC. Facilities were advised to identify more testing corners at the Young Child Clinic (YCC), general ward, inpatient, and outpatient (Q1-Q4).
- **External Quality Assurance:** To maintain the quality of HTC services provided, ASSIST in collaboration with UVRI and CPHL supported 137 sites to participate in proficiency testing through the HTC EQA scheme. As a result, 90% of the participating laboratories passed while 94% testers achieved satisfactory scores (100%) compared to 88% last year (Q1-Q4).
- **Supply chain:** Mentorship focusing on quantification of HIV test kits was done to ensure that sites submit correct quantifications. District based Medicine Management Supervisors, facility in-

charges and storekeepers were mentored by supply chain experts. In addition, emergency ordering and redistribution of HTC test kits to address isolated incidents of stock-outs were supported. Apac and Oyam have been consistently requesting for fewer test kits than the patients they have (Q1-Q4).

Prevention of Mother to Child Transmission (PMTCT)

This year, PMTCT efforts yielded the following results:

- **Pregnant women with known HIV status:** A total of 94,535 pregnant women had a known HIV status, translating into only 67% of the annual target (140,293) achieved.
- **HIV positive pregnant women receiving ART:** Of the 6422 HIV positive pregnant women, 6243 received ARVS for eMTCT- translating into 42% (14,968) achievement of the annual target.
- **Exposed infants virologic testing:** A total of 47,770 HIV exposed infants had a virological HIV testing with 12 months of birth against an annual target of 11974, 40% achievement.
- **Final outcome status for exposed infants by 18 months of age:** Of the 3,708 exposed babies who had a documented outcome at 18 months this year, 4% (148) were HIV positive, showing a less than 5% transmission rate among exposed babies.
- In summary, all five indicators were below target mainly due to the high targets set in relation to the expected number of pregnancies during the year.

Several interventions supported the achievement of these results including: Improving retention of mothers on Option B+ in ANC and of mother-baby pairs in postnatal care; provision of cotrimoxazole at 6 weeks, improving, commodity and stock management, improve testing of HIV exposed babies at 6 weeks, post-breastfeeding and at 18 months. In summary, all five indicators were below target mainly due to the high targets set in relation to the expected number of pregnancies during the year. Key activities carried out this year included:

- **Accreditation of PMTCT sites:** Support was provided to facilities that were not accredited for PMTCT service provision and these included St Peter and Paul in Lamwo district and Guru Guru, in Amuru district. These were assessed and information was shared with the MoH for accreditation. In Guru Guru ASSIST has supported them to improve their reporting and organize their services.
- **Formation of district PMTCT cluster teams:** ASSIST supported the formation of district PMTCT cluster teams to build capacity for improving services at both district and facility level. These teams included the district PMTCT focal person, trained and experienced midwives and members of the DHT, who have supported all PMTCT health facilities in their districts (Q4). The district clusters will provide frequent support to all the PMTCT sites in their districts to achieve the goals of the PMTCT program.
- **Integrated coaching and QI:** During the year, four rounds of integrated, targeted collaborative and PMTCT PHFS coaching were done to strengthen PMTCT service provision, and address service quality gaps. Key PMTCT strategies were discussed including PITC to ensure that all pregnant mothers are tested for HIV, and improving services provided at the mother-baby care points. (Q1-Q4).
- **Mentorship:** ASSIST carried out four mentorship visits this year to the sites providing PMTCT services, focusing on birth cohort and early retention monitoring in health facilities that had been trained. Health facilities were supported to transfer exposed infants into birth cohorts in the EID registers. The HCA tool and addendum 012 were distributed to all PMTCT sites. Furthermore, sites were supported to improve documentation of EID registers; which enabled the team to identify the lost and generate lists for follow-up by linkage facilitators and peer mothers (Q1-Q4).
- **Birth cohort monitoring and early retention monitoring training and roll out:** To ease identification and tracking of exposed infants due for virologic tests within 12 months, a total of 400 health workers were trained in birth cohort monitoring and retention, training 131 sites between March and August 2016. Health workers included midwives from the mother-baby care points, health information assistants and the ART clinic in-charges (Q4).
- **Supply chain:** There is general improvement in the commodity /stock management from 9 to 2 facilities reporting stocks as observed in the Option B+ weekly reports. To ensure that all HIV-positive pregnant women receive ARVs, ASSIST supported the quantification and delivery of emergency orders from NMS. ASSIST also organized for and supported the redistribution of

nevirapine syrup for exposed babies to sites which reported a stock out or did not receive nevirapine.

- **Health education and counselling:** At the facilities, there was involvement of linkage facilitators and peer mothers in health education and counselling to support HTC services at ANC.
- **Weekly Option B+ reporting:** Weekly Option B+ reporting was improved through a number of interventions including updating and cleaning up the list of names supported. This was strengthened through a clean-up of the system of available contacts in the system responsible for reporting.
- **Data review meetings:** ASSIST carried out PMTCT data review meetings in 13 districts reaching 300 health workers including midwives, biostatisticians and health information assistants. These data review meetings focused on addressing the gaps in the data reported in the DHIS2 and on building the capacity of health workers to use and interpret the eMTCT codes correctly. Job aids in the form of stickers and sheets were also developed and distributed to all the health facilities. 690 laminated copies of the eMTCT codes and 100 copies of the 'Guide for ART for eMTCT initiation, retention monitoring and birth cohort monitoring' were distributed to all the sites (Q3).

Voluntary Medical Male Circumcision

- In Northern Uganda, ASSIST provided above site technical support in QI to SDS which is responsible for the service delivery. The QI efforts are highlighted under above site technical assistance, activity 6, SMC section.

Activity 3. Improve care and treatment for pediatric and adult patients with HIV

OVERVIEW

To address the gaps related to HIV care and treatment service provision, ASSIST supported the delivery of care and treatment services with the ultimate goal of attaining viral load suppression for children and adults living with HIV. Following the 90:90:90 targets, results for the first 90 were included under the prevention section HTC above; below are the results for the second and third 90.

KEY ACCOMPLISHMENTS AND RESULTS

Second 90: People with diagnosed HIV infection will receive sustained antiretroviral therapy

ASSIST focused on rolling out the HIV Continuum of Response (CoR) approach. For all identified HIV positive patients, the focus was immediate enrolment into care.

Key results in FY16 included:

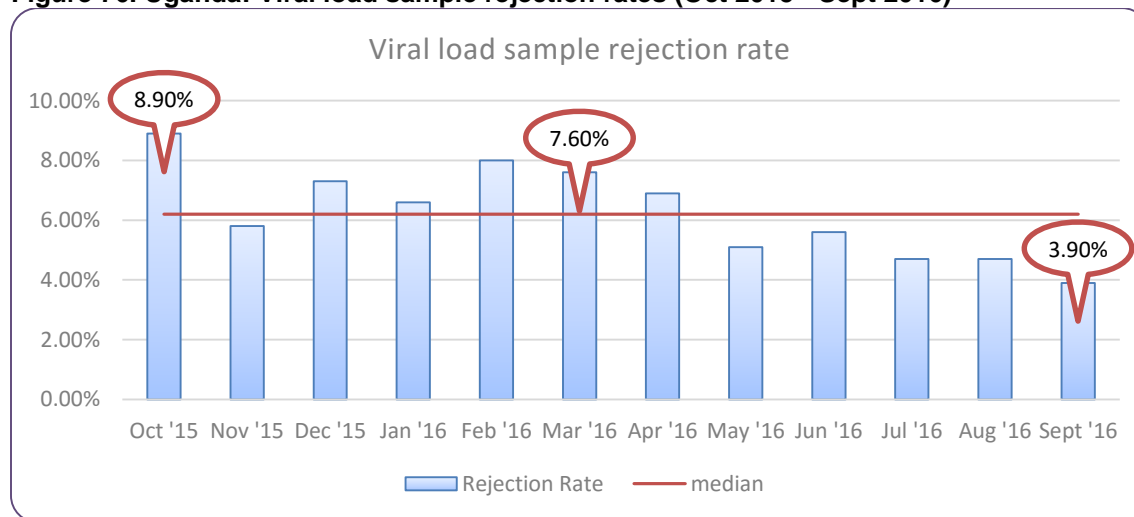
- **14,791 HIV positive individuals enrolled into care.** Comparing this with the 18,486 who received HTC services above, it shows that over three years, 80% of the identified positives were successfully linked into care. Two major strategies were utilized to ensure successful linkage. Community level - Use of portable PIMA machines for baseline CD4 assessment to find out if they are eligible for ART. Facility level – Physically escorting the HIV-positive clients to ART clinic for enrolment and ensuring that the clinical assessment is immediately done. In addition, sharing of a list of identified positives with linkage facilitators for follow-up to keep appointment dates.
- **72,003 HIV-positive individuals active in care, achieving 105% of the annual target (68,514).**
- **81% of the HIV-positive clients in care were screened for TB (58,180)**
- **14,271 HIV-positive individuals newly enrolled on ART, achieving 85% of the annual target (16,811).**
- **63,291 HIV-positive individuals currently receiving ART, achieving 99.9% of the annual target (63,357).**
- **79% of the HIV-positive clients retained on ART in the last 12 months.**
- **One of the bottlenecks in the CoR is timely CD4 tests to identify people eligible for ART.** This was especially prominent at health units without a CD4 machine. ASSIST therefore supported the routing of the hub riders to ensure samples were picked from each facility before they expire. The target was to have the CD4 test done not more than four days after the sample is taken from the patient. Linkage facilitators were engaged to trace patients who had left without CD4 samples being taken which was done through phone calls and physical visits to clients staying in nearby villages.

- **Training:** ASSIST in partnership with the MoH trained 133 health workers in pediatric and adolescent HIV care and treatment services and as a follow up, post-training mentorship was conducted to provide technical support toward implementation of prioritized site action plans (Q1-Q2).
- **Supply chain:** ART sites were supported to monitor their ART logistics for timely and accurate ordering and reporting in an attempt to address stock outs. In Agago and Kitgum districts, which experienced stock-out of ARV more especially TDF/3TC/EFV due to non-delivery of the item by national medical stores, ASSIST supported the quantification of the emergency needs and delivery of the emergency order from NMS to the district. The delivered ARVs included TDF/3TC/EFV, AZT/3TC/EFV, and ABC/3TC which greatly reduced the rampant stock-outs in the districts. For special groups such as TB patients, establishment of a one-stop model for TB/HIV services to ensure all TB patients have a documented HIV status and those positive start ART.
- **Mentorship:** In a strategic effort to increase retention on treatment for active ART clients, on-site mentorship was provided to set up HIV care teams across all 127 ART sites. Teams were supported to provide the standard care package that includes weekly identification and tracking of missed appointments through expert clients and/or linkage facilitators. In addition, they were provided routine adherence monitoring and support with routine clinical assessment and viral load monitoring to allow clinical care teams to proactively identify and manage treatment failure and thereby improve treatment outcomes.

Third 90: People receiving antiretroviral therapy will have viral suppression

- **This year, 63,127 viral load tests were conducted in Northern Uganda. Overall, 152% (41,614) of the annual viral load testing target was achieved.** There was an increase in the tests done, from 5,249 tests in October 2015 to 7,858 in September 2016. The second focus this year was to reduce the high sample rejection rates through mentorship on specimen collection, packaging, completion of request forms and results' utilization. As a result, of the 63,127 viral load samples from 15 districts sent to the Central Public Health Lab, sample rejection rate was reduced from 8.9% in Oct 2015 to 3.9% (**Figure 76**).

Figure 76. Uganda: Viral load sample rejection rates (Oct 2015 - Sept 2016)



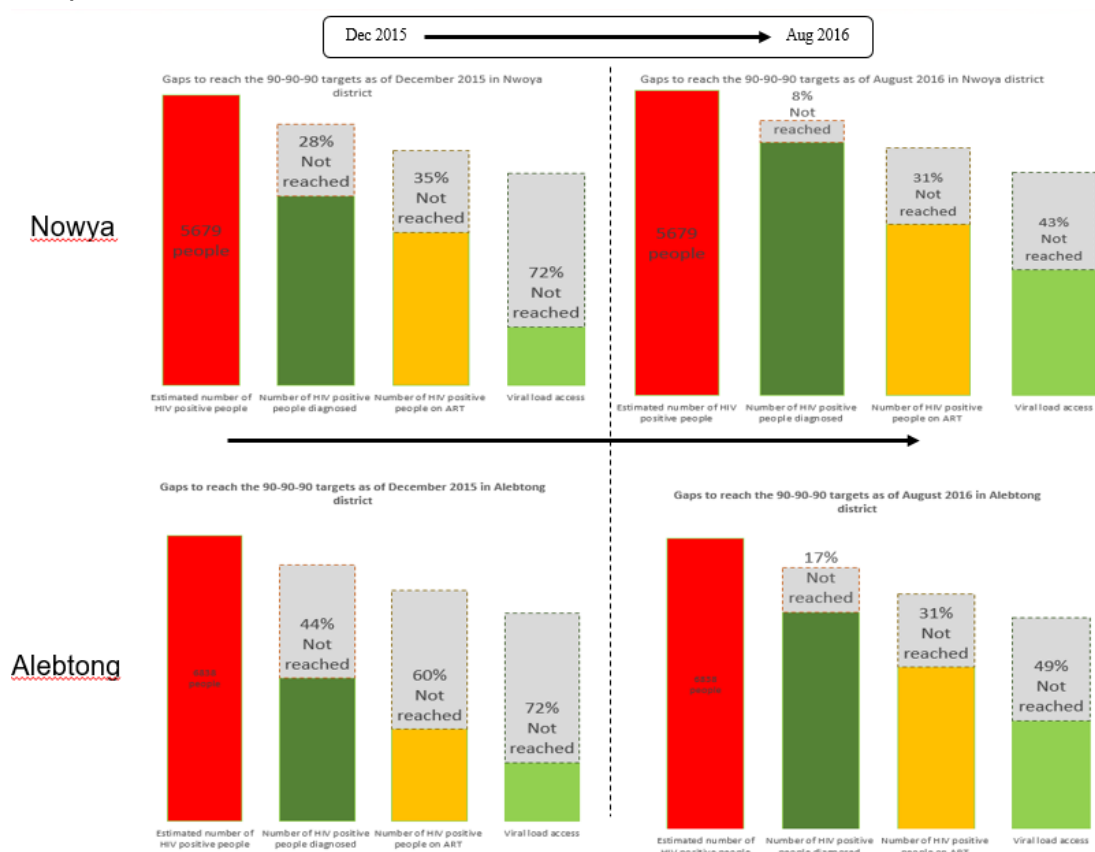
- **Review of viral load curriculum:** In July 2016, four ASSIST staff participated in the national TOT to review the revised curriculum for viral load. A Regional ToT was later organized in August and onsite viral load trainings initiated in September.
- **Viral load backlog reduction:** To reduce the backlogs of clients due for viral load (VL) testing, ASSIST conducted an assessment, listing clients who had not done a viral load test within the last one year. Linkage facilitators then supported the mobilization of these clients to attend viral load backlog clearance camps. The viral load testing was done in the community in three districts of Nwoya, Alebtong and Oyam. During these camps, 79% of the viral load backlog was cleared having collected 497 samples (Q4).

- **Proper documentation:** Ensuring updates of all the viral load results into the client cards and ART registers was emphasized during the onsite mentorships.
- **Supply chain:** ASSIST also focused on improving the availability of lab commodities (viral load test kits and HIV test kits) through redistribution, quantification and ordering. In addition, the quality of laboratory services was strengthened through SLMTA cohort workshop, conducted for the 11 hubs. Lab Quality Management Systems mentorship took place and hub coordination meetings (Q3-Q4).

Other services

- **HIV/TB services:** ASSIST continued to support facilities to ensure integration of TB services. During the year, 70% of the TB patients were tested for HIV and 88% of the HIV patients active in care were screened for TB at their last clinical visit. For more details, refer to the TB section under family health.
- **HIV/nutrition services:** During the year, 85% of the active clients in HIV care had their nutrition status assessed and recorded in the registers and client cards; this proportion is slightly higher than the annual target of 80%. Further details included in the nutrition section under family health.
- **Improve data and reporting for HIV care:** All 16 District biostatisticians were engaged in a two-day meeting to review the data entered particularly around ART, TB, PMTCT and MNCH. Several checks were run and all discrepancies shared immediately with the district team. The meeting was followed up with a 4-day on site mentorship to verify the discrepancies that directly came from the facilities and edits were later made to the system by the respective districts biostatisticians (Q1-Q4).
- **Figure 77** shows the achievement to date at district level in Nwoya and Alebtong from Dec 2015 to Aug 2016. In Nwoya, the gap for the first 90 was reduced from 28% to 8% and 44% to 7% in Alebtong.

Figure 77. Uganda: Achieving 90-90-90 at district level, Nowya and Alebtong (Dec 2015 and Aug 2016)



Activity 4. Improve family health

OVERVIEW

Maternal, newborn and child health: The spread of best practices for improving MNCH health to the other nine districts was the key intervention this year. ASSIST spread SMGL lessons to 56 health facilities through bi-weekly coaching and mentorship. The focus was to reduce maternal and newborn deaths by building health workers' skills on the correct and consistent use of partographs for monitoring labor progress, AMTSL and newborn resuscitation. In addition, the quality of ANC and labor processes were handled.

KEY ACCOMPLISHMENTS AND RESULTS

Key results included:

- **77,034 children less than 12 months of age received DPT3, achieving 91% of the annual target (85000).**
- **A reduction in newborn deaths (0-7days) from 1.1% Oct – Dec 2015 to 0.6% Jul-Sept 2016.**
- **Postnatal attendances have improved from 29,354 Oct – Dec 2015 to 34,060 Jul-Sept 2016.**

Key activities included:

- **HBB training for 77 health workers in resuscitation skills** (July 2016).
- **Provided mentorship and coaching of the health workers in skills to improve MNCH outcomes** (Q1-Q4). The focus was on improving early detection of complications of labor and delivery using partograph, AMTSL, newborn resuscitation using HBB plus guidelines and conduct of maternal and perinatal death reviews. Four rounds of mentorship and coaching were done in 27 non-SMGL health facilities. Due to this mentorship, there has been improvement in patient outcomes.
- **In 96 of the 137 facilities, protocols and guidelines on AMTSL, essential newborn care, and newborn resuscitation and partographs were distributed and health workers were mentored on ordering for supplies and drugs to reduce stock-outs.** Patient registers were distributed to facilities and newborn resuscitation corners were set up in the facilities. Kitgum General Hospital and Anyeke Health Centre IV were assisted to set up a newborn care room. HBB skills labs were set up in Aber Hospital, Aboke HC IV and Kitgum General Hospital. The facilities have been assisted to identify a Kangaroo Mother Care corner/room. The district leadership has been supported to review their performance.
- **ASSIST supported the formation and orientation of maternal and perinatal death review committees at Kitgum hospital, Padibe HC IV and Alebtong HC IV to conduct routine and timely maternal perinatal audit reviews to remedy maternal and newborn deaths.**

Family planning

FP interventions focused on spreading lessons learnt on FP/HIV integration to health facilities in Northern Uganda. ASSIST ensured that PLHIV got access to FP information and a range of services in ART clinics and mother-baby care points.

Key results included:

- This year, family planning services were utilized as disaggregated (Female sterilisation – 691, Male sterilisation 75, IUDs 5,215, Injectable 47,727, implants 21,374, condoms 55,064, oral contraceptives 13,915, and emergency contraceptives – 1106). This shows that the estimated protection provided by family planning services during this one-year period was 102,214 couple-years of protection, based on the volume of all contraceptives provided to clients during the year. These results show a 68% achievement of the annual target (150,000) for couple years of protection.
- The proportion PLHIV women 15-49 yrs. who accessed FP counseling increased from 0% (Jan 2016) to 77% (Aug 2016)
- The proportion of women 15-49yrs who received FP services in mother-baby care points increased from 0% (July 2015) to 83% (Aug 2016).

A number of activities were conducted to achieve these results including:

- **Mentorship:** ASSIST enhanced the capacity of health workers in the provision of quality FP counseling services, FP/HIV integration, and the medical eligibility criteria for contraceptive use for HIV positive clients and infection prevention using the four steps of processing instruments. Key emphasis was placed on voluntary FP provision based on informed choice. Specifically, ASSIST helped facilities to set up FP clinics at the HIV clinics and Mother Baby Care points. The clinics were stocked and health workers designated to offer the service during the clinic days. Through coaching and clinical mentorship, skills of the health workers were addressed in regard to counselling on FP and method provision (Q1-Q4).
- **SOPs and guidelines:** Health workers were provided with SOPs and guidelines for FP provision such as emergency contraception guidelines (Q1-Q4).
- **Supply chain:** To reduce the challenge of stock-outs, ASSIST supported health workers on how to make timely orders and re-distribution of FP supplies from over-stocked facilities to facilities with no stocks, thereby ensuring better method mix in facilities (Q1-Q4).
- **FP interventions focused on spreading lessons learnt on FP/HIV integration to another 56 health facilities in Northern Uganda (Q4).** ASSIST ensured that PLHIV got access to FP information and a range of services in ART clinics and mother-baby care points. Key changes included: (1) introducing a FP method column in the dispensing logbook to capture FP data since most sites normally have only one FP register that is not stationed in the mother-baby care point; (2) improving FP counseling skills of linkage facilitators in HIV clinics; and (3) redistribution of FP commodities to HIV clinics to create “one stop shops” for HIV clients to minimize waiting time and ensure clients access multiple services at a go. To facilitate integration of FP into HIV clinics, 18 linkage facilitators from nine facilities were trained on basic FP counseling. The project will train more linkages facilitators in FY17.

Nutrition

The goal of the nutrition work in Northern Uganda is twofold; to improve the nutrition status of people infected and affected by HIV/AIDS through the integration of key activities such as NACS into routine HIV/AIDS care; and to improve the nutrition status of children under age five and pregnant mothers. The nutrition work is also focused on supporting selected health facilities to appropriately manage malnourished clients according to the national guidelines and improving the availability and quality of nutrition data across 137 health facilities in northern Uganda. So far NACS has been scaled up to 51 health facilities in the region.

Key activities included:

- **Integrated into monthly QI coaching and mentorship (Q1-4):** Facilities were supported to integrate nutrition into routine health service delivery especially at key contact points mainly ANC, HIV/ART clinic, maternity and postnatal clinics. Nutrition assessment in HIV clinics, ANC and PNC is being done at all the health facilities using color-coded MUAC tapes. At some contact points such as ANC the health workers take weight and height and categorizing those using Z-score wheel charts which were previously supplied to the health facilities by ASSIST.
- **Targeted coaching and mentorship on integrated management of acute malnutrition (IMAM):** ASSIST conducted coaching visits to the 9 PIN-supported health facilities that provide RUTF and IMAM services in the north. These visits focused on improving the quality of services and reporting.
- **QI:** ASSIST provided coaching on nutrition in the 1st 1000 days in 6 health facilities. Eighteen district coaches were trained in QI and oriented on coaching. These coaches will support the scale up of lessons learned on improving NACS and IMAM to other health facilities in the region (Q1-Q4).
- **Baby friendly health initiative coaching and mentorship:** This was conducted at Orum HC IV (Otuke district) and Amolatar HC IV (Amolatar District). The coaching aimed at promoting, protecting and supporting breastfeeding. Health facilities were also supported to obtain the baby friendly health status by implementation of 16 steps of successful breast feeding. In Otuke District at two high-volume supported health facilities, more than 90% of pregnant women attending ANC receive nutritional assessment and ferrous sulphate/folic acid supplementation. Also in Amolatar

District, more than 80% of HIV clients and pregnant women attending ANC, supported health facilities receive nutritional assessment (Q1-Q2).

- **Provision of Z-score charts and SOPs for nutrition:** ASSIST printed and laminated Z-score charts which were supplied to 40 health facilities in northern Uganda. The Z-score charts will enable health facility workers to assess and categorize children who below 6 months mostly at mother-baby care points and YCC. MUAC cut-off reference and steps for taking MUAC SOPs were also supplied (Q1).
- **Distribution of MUAC tapes:** Color-coded MUAC tapes for nutritional assessment were distributed to health facilities (HC IIIs) which were lacking them in Kitgum and Alebtong districts (Q2).
- **Capacity building:** ASSIST trained 156 health workers in NACS from selected health facilities across the region. The goal of this training was to build the capacity of health workers to provide nutrition services to PLHIV, pregnant and lactating women, and children. The training aimed at equipping health workers with knowledge, skills and techniques to determine nutrition status, improve counselling, use QI for NACS, collect and synthesize data for reporting and monitoring (Q1-Q4).

Key nutrition results:

- Of the 69,851 active clients in HIV care this year, 89% (62,339) had their nutrition status assessed and recorded in the registers and client cards; this proportion is slightly higher than the annual target of 80%. Onsite mentorship on how to take and document MUAC in the relevant data capture tools was done. Integration of nutrition assessment has been a key aspect of all coaching visits within the facilities. Integration of nutrition into maternal and child health services:
- 387,767 children under five years were reached with nutrition programs including nutrition counselling and assessment. This shows 94% achievement of the annual target (411,560)
- A total of 384,238 children receiving vitamin A, achieving 132% of the annual target (290,000).
- 72% of health facilities had the capacity to manage acute under-nutrition by September 2016.
- 263 health workers were trained in child health and nutrition, achieving 38% of the annual target (685).
- Increase from 26% in Jan 2016 to 85% in July 2016 (2,280/2,832) of ART clients with nutrition assessment in HIV care cards and ART registers.
- Increase from 35% (March 2016) to 95% (Jul 2016) for pregnant women with nutrition assessment including those who are HIV+ in the antenatal registers.
- From 12% in March 2016 to 83% in Jul 2016 for HIV-exposed infants with nutrition assessment from 0-18 months.
- Enrollment for malnourished clients increased from 51% in Jan 2016 to 72% in August 2016 on Ready to Use Therapeutic Feeds (RUTF).

Malaria

ASSIST supported facilities to strengthen prevention among pregnant mothers and children, improving quality of malaria case management and ensuring availability of malaria commodities.

- **Training of health workers:** A total 572 health workers were trained in integrated case management of malaria between Q1-Q3. The training was facilitated by MoH – National Malaria Control Program (NMCP) staff and regional trainers from the rest of the country. Targeted health workers were: newly recruited personnel in HCIII and HCIV facilities who have never had a training in IMM and RDT use and frontline health who were newly recruited and have never been trained. The training included practical sessions on RDTs and Artesunate use and other aspects of management of malaria including; introduction to malaria, evaluation of patient with fever, performing RDT, evaluation of a patient with a negative blood slide or RDT, treatment of uncomplicated and complicated malaria, management of malaria in pregnancy, malaria and HIV/AIDS co-infection, management of fever after malaria treatment, monitoring for drug safety and pharmaco-vigilance, patient education, medical record keeping, medical supply management, and infection prevention and control.
- **Building capacity of Village Health Teams (VHTs) to provide mass fever treatment to suspected malaria patients in response to the malaria epidemic.** After completing training of

VHTs in Malaria Fever Treatment (MFT) on September 18, 2015, ASSIST developed a plan to start mentorship of all the 7,911 trained VHTs in the 72 sub counties. Two consultants were recruited to lead the mentorship exercise working with the ASSIST improvement Advisor. Initial starting off VHT mentorship included; 1) developing mentorship tools- mentors guide, a sub county /district summary form 2) review of the tools by ASSIST and PMI staff 3) communicate to the MoH, district and sub county mentors to participate in a mentorship planning meeting 4) working with the MoH, and district teams, developed a cascade approach for the VHT mentorship which included selecting district based focal person -malaria focal persons in each district and orienting them on the mentorship plan including mentorship guide and reporting tools. These mentored the sub-county and parish-based mentors who included the health assistants, health facility in charges who previously trained 7,911 VHTs. 27116 VHT mentorship encounters were conducted across 72 sub counties. Given 7911 trained VHT on MFT, it means that at least every VHT had a mentorship encounter, 3 times over 6 weeks.

- **Supply chain:** To avert the impending stock out of anti-malarials due to the high malaria burden in Northern Uganda, ASSIST engaged the District Medicine Management Supervisor and Malaria Focal Person to make an emergency order that would last for a while in Amuru District. In addition, redistribution of ACTs was discussed and this was done within the region. Districts with stock-out of malaria commodities were supported to place emergency orders and redistribution of ACTs and RDTs across districts (Q1-Q4).
- **Mentorship:** ASSIST mentored health workers in malaria management emphasizing diagnosis of malaria by RDT and microscopy for under 5 years as well as patient education, community case identification, referral management and integration to outreaches (Q1-Q4).
- **SDS delivered a consignment of mosquito nets to health facilities in the Northern region and ASSIST has been working with health facilities to ensure that the right information is provided to patients about correct use of these nets (Q3).**
- **ASSIST conducted a malaria learning session for the collaborative sites.** Key changes identified for improving test and treat policies included: (1) Setting up RDT testing corners in ANC and OPD, especially when laboratory is closed; (2) putting up reminders on testing before treatment in clinical rooms; (3) reminders for dispensing staff to offer to dispense to only patients with positive results; and (4) monthly review of stock of health commodities and monthly CMEs (Q4).

Key QI results:

- The percentage of suspected malaria cases tested for malaria increased from 59% (Mar 2015) to 97% (Aug 2016);
- The percentage of suspected cases treated after a positive malaria test increased from 22% (March 2015) to 70% (Aug 2016)
- The percentage of clients tested negative for malaria that reduced treatment for malaria reduced from 63% (March 2015) to 7% (Aug 2016).
- The average stock-out days for ACTs is 2 days, 4.5 days for RDTs, 20 days for Fansidar for IPT, and 7 days for LLITNs.
- Malaria death rates has been maintained on average at 1.1% per month.

Tuberculosis

ASSIST's TB work is this year focusing majorly on improving TB case detection and TB HIV co-management through detection as well as appropriate treatment of co-morbid patients in the 15 districts of Acholi and Longo sub regions. To achieve this, ASSIST maintains the CQI approach as a core strategy for improving the quality of TB care in Northern Uganda. Several activities to address existing gaps have been conducted over the past months.

Key results include:

- TB treatment success rate was 79% against TB an annual target of 85%.
- TB case notification rate was 165/100,000
- 81% (58,180/72,003) of the active HIV-positive TB patients in care were screened for TB symptoms at their last visit.
- 81% TB patients were tested for HIV

- 81% of the HIV-positive TB patients were on ART

These results were achieved through various interventions including:

- **Community TB management to reduce LTFU included on-site coaching** toward use of tracking SOPs with follow up outcomes used to update the unit TB register; VHTs, linkage facilitators and SCHWs conducted routine follow-up while inter-district coordination between District TB and Leprosy Supervisors has been emphasized for cross-border facilities experiencing incidents of self-transfer (Q1).
- **A one-stop shop model for delivering TB and HIV services was rolled out to 22 high-volume sites, and IPT was rolled out to 3 sites with INH in the region.** Targeted mentorship and coaching for 12 high-volume sites was conducted to address observed competence gaps across the TB process of care and to spread TB improvement work respectively. The second TB learning session was convened targeting 12 collaborative sites and District TB and leprosy supervisors to discuss lessons learned and harvest best practices for spread (Q1-Q2).
- **In an effort to improve GeneXpert utilization, on-site GeneXpert user training and mentorship for 112 laboratory personnel and clinical personnel was conducted for five sites with GeneXpert machines that are supported by ASSIST** (Kitgum, Apac, Anaka hospitals, Madiopé, Amolatar HC IVs). 795 samples were tested during the year from average of 120 samples last year while weekly reporting rates improved from zero percent last year to 100% by the end of the year. As a result, 165 positive samples were detected and linked to appropriate treatment (Q1-Q4).
- **To improve data management, emphasis has been put on review of TB data reported in HMIS 106a and conduct of on-site data review meetings, data verification and mentorship.** District-level data meetings have also been done with the DHT and RPMT members for TB. Provision of technical support to District biostatisticians towards timely and accurate entry of data in DHIS 2 and distribution of TB HMIS tools have also been key activities (Q1-Q4).
- **To improve the availability of TB supplies and logistics, TB DTUs have been supported in making timely and accurate logistics orders for TB medicines and supplies** (slides, sputum mugs, reagents, laboratory request forms). In situations of stock-outs support has been provided in distribution and submission of emergency orders for TB medicines and supplies (Q1-Q4).
- **To improve the coordination of TB services in the region, ASSIST supported the quarterly regional TB performance indicator review meeting for Acholi and Lango regions.**
- **TB infection control committees:** A baseline assessment done last year through district improvement advisors revealed a lack of TB infection control (TB IC) committees and functional plans in the supported sites across the region. This informed a plan to support the facilities constitute TB infection control committees, draft, approve and functionalize infection control plans at all service delivery points in these units. A total of 25 TB infection control committees were set up to develop and display TB IC plans at all entry points (Q1-Q2).
- **Targeted on-site mentorship and coaching were also conducted for 132 sites to orient health workers on accurate use of the revised Unit TB register, the presumptive TB register, the HMIS reporting tools.** The revised ICF tool, TB diagnostic algorithm and GeneXpert request forms were also handled including provision of relevant job aids (Q1-Q4).
- **Health education on sputum monitoring schedules:** In a bid to improve treatment success rates, routine health education on sputum monitoring schedules for each TB case, weekly generation of a lists of clients due for sputum monitoring for prompt identification and linkage to the laboratory, establishment of appointment systems for TB clients as well as weekly data reviews for unit TB and Laboratory TB register with reconciliation to ensure data completeness on outcomes within the unit TB register were done (Q1-Q4).
- **TB review meetings were organized every quarter in collaboration with National Tuberculosis and Leprosy Program and the zonal TB and Leprosy supervisor to review progress.** Data validation was carried out to minimize errors especially during data collection and data entry. It helps avoid double reporting.
- **Pediatric TB mentorships took place in all the sites providing TB services.** Over 300 health workers were mentored on pediatric TB management in all 16 supported districts.

Key QI results from 103 facilities include:

- TB treatment success rate increased from 65% (Oct 2015) to 72% (July 2016)
- ART initiation for PLHIV with TB increased from 85% (Oct 2015) to 90% (Jul 2016)
- TB patients with documented HIV status remained 95% between Oct 2015 and July 2016

Section 2: Saving Mothers Giving Life (SMGL)

Activity 5. Improve maternal and newborn care through the SMGL initiative

OVERVIEW

The Saving Mothers Giving Life initiative (SMGL) is aimed at reducing MMR and NMR by 30% every year in 6 districts (Apac, Dokolo, Gulu, Lira, Nwoya, and Pader). In northern Uganda, USAID ASSIST started SMGL facility work in February 2015 and this year, has spread lessons learnt and best practices from the 20 high-volume facilities to additional 98 facilities. The spread package included: clean and safe delivery practices, active management of labor and delivery processes, routine screening and management of obstetric complications, and Helping Babies breathe plus (HBB+) practices.

KEY ACCOMPLISHMENTS AND RESULTS

Key Results: Through the SMGL facility interventions, there's a reduction (July-Sept 2015 to July-Sept 2016) in:

- Institutional maternal mortality from 160/100,000 to 94/100,000.
- Perinatal mortality from 27/1000 to 16/1000.
- Still birth rate from 19/1000 to 12/1000
- Pre-discharge neonatal mortality from 9/1000 to 4/1000.
- **Provision of quality ANC.** In January 2016, the number of pregnant women going for their first ANC visit screened for syphilis was at 20% with none being diagnosed with syphilis. With the requisition of syphilis rapid test strips from the lab and conducting RPR and HCT concurrently in ANC, the percentage of first ANC mothers tested for syphilis has increased to 77% and those diagnosed & treated for syphilis increased to 4% in Aug 2016.

The following activities were implemented during the year:

- **Onsite coaching and mentorship:** ASSIST supported 118 facilities to improve prevention and management of post-partum hemorrhage (PPH), routine screening for obstetric complications (pre-eclampsia, syphilis and anemia) during antenatal care, and prevention and management of neonatal sepsis and prematurity. Among the system issues identified and addressed included; establishment of skills labs for PPH management, HBB+ practices, infection control measures, and correct use of HMIS tools to document all complications and their associated outcomes.
- **Training:** A HBB training was organized, training 77 health workers in newborn resuscitation and essential newborn care.
- **Peer-to-peer learning sessions:** Quarterly peer-to-peer learning session for the 20 high-volume facilities were conducted to facilitate learning and sharing of the best practices.
- **Maternal and Perinatal Death Review (MPDR) meetings:** USAID ASSIST supported 6 district MPDR committees to become functional and also supported quarterly MPDR meetings to follow up on recommendations from facility MPDR meetings. Key recommendations from the review meetings included; expedition of the theatre repairs of Lalogi which was completed and commissioned; stationing of an ambulance at Awach HCIV and reallocation of two midwives to bridge a gap for skilled birth attendance at Rackoko HCIII.
- **Review meetings:** SMGL quarterly performance improvement meetings were conducted involving district health officers and leaders and facility staff. Existing gaps discussed included: functionality of HCIV theatres, emergency referral systems, blood transfusion services, and plans to address district-specific challenges were developed.
- **MNH equipment:** Key equipment was delivered to 24 health facilities this year. The equipment included; Vaginal speculums, Stethoscopes, Blood pressure machines, mama kits, delivery beds, examination beds, clutches, drip stands, digital thermometers, etc. donated by CURE project. Following this, ASSIST engaged the regional equipment maintenance teams based at the two

regional referral hospitals of Lira and Gulu to support the facilities that received CURE equipment to utilize the equipment including minor repairs. Newborn resuscitation equipment was received from the UN Commission on Life-saving Commodities for all the 15 districts of northern Uganda including the 6 SMGL districts. These included: penguin suction bulbs, resuscitators, neonatalies, preminatalies, HBB facilitator guides, HBB learners work books, and HBB posters.

- **Human resource for health:** Through engagement of the district health office, midwives were assigned to Rackoko HCIII and All Saints HCII (PNFPs) in Pader District for the first time.
- **Supply chain:** Actively supported the redistribution of the different key drugs and supplies from stocked facilities to facilities with stock-outs. Such items have been ketamine for anesthesia and magnesium sulphate for management of pre-eclampsia to improve processes of MNCH service provision.
- **Data management:** ASSIST has used the pregnancy outcomes monitoring system to strengthen the quality of data collected, address documentation gaps and use it to improve the quality of data at facility level.
- **Monitoring labor and delivery care in the 20 high-volume facilities.** With trends of increased PPH cases during the last quarter, the 20 improvement teams have been supported to review each case of PPH and use the learning to improve the prevention and management of PPH cases. Simulation sessions have also been conducted during onsite mentorships to assess the skills of health care providers in practicing AMTSL practices.

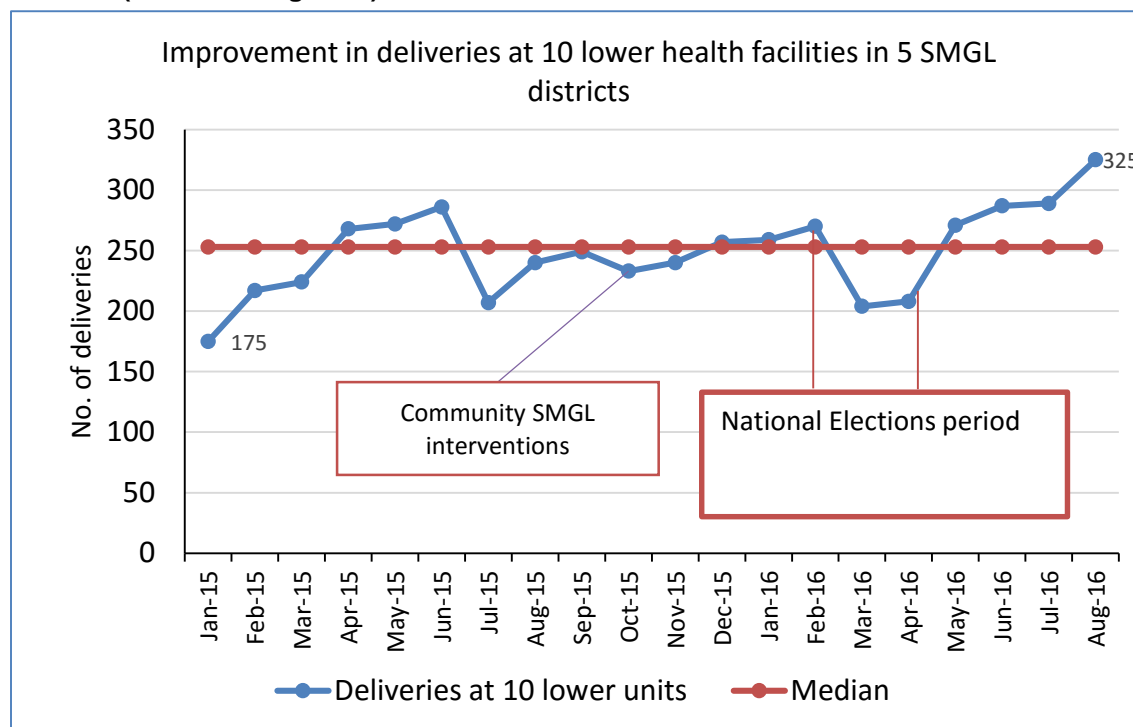
SMGL community initiative

The aim of the SMGL community initiative is to address community and individual delays to ensure that women attend early ANC visits and deliver at health facilities and that mothers and newborns with danger signs are identified and treated at health facilities. This activity targeted about 14,406 pregnant women living in 514 communities in the catchment of 48 health facilities in six out of 15 districts. Approximately 60% of these pregnancies have been registered by 1,894 VHTs and trained on MNCH.

Key Results:

- Improved ANC visits in first trimester at 34 SMGL health facilities from 34% in Jan-Mar 2016 to 59% in July-Sept 2016.
- Pregnant women with birth plans, saving for transport and emergency expenses increased from 50% in Jan-Mar 2016 to 83% in July-Sept 2016.
- Babies with danger signs referred to facility increased from 39% in Jan-Mar 2016 to 98% in July-Sept 2016.
- The number of pregnant women receiving messages about birth preparedness increased from 581 in Jan-Mar 2016 to 1013 in July-Sept 2016.
- **Improved postnatal visits for lactating mothers:** Postnatal visits at six weeks improved from 4,368 (July-September 2015) to 5,758 (January-March 2016) at 21 SMGL facilities. Community-level activities which led to improvement include following up and referral of women after child birth which improved from 57% in October 2015 to 97% in May 2016. In addition, VHTs conduct two postnatal visits to mothers twice within seven days after child birth to assess for danger signs, refer women who delivered in the community to health facilities and counsel mothers on proper cord care.
- **Promoted institutional deliveries in lower health units from 175 in January 2015 to 325 in August 2016 (Figure 78).** Community strategies employed to improve deliveries included:
 - Promoting early childbirth preparedness through saving.
 - Involving religious leaders in addressing the negative social and cultural norms.
 - Involving TBAs as birth companions and
 - Dissemination of messages about facility deliveries to the community.

Figure 78. Uganda: Increased in institutional deliveries, 10 lower health facilities, 5 SMGL districts (Jan 2015-Aug 2016)



Activities during the year included:

- **Training:** A total of 1,894 VHTs were trained in MNCH this year against the target 1032 VHTs. The major training areas included identification of women with danger signs, newborn care, and birth planning. As a result, VHTs have mapped 2843 pregnant mothers and referred them to attend antenatal and delivery care at the respective health facilities. Traditional birth attendants (TBAs) have also been supported to change their roles from delivering to referral of mothers to health facilities.
- **Health promotion:** VHTs and TBAs disseminated messages promoting facility deliveries to 1924 pregnant women in 119 villages. These have contributed to the increased number of deliveries. Community-level dialogue meetings were held in communities with fewest facility deliveries. The purpose is to discuss barriers and solutions.
- **First trimester visits** were promoted through issue of certificates of appreciation to first trimester attendees and their partners. VHTs screen and refer women of child-bearing age with signs and symptoms of pregnancy to the health facility.
- **ASSIST together with CHC** engaged 15 religious leaders from five sub counties in Gulu to support the SMGL program to shift the negative social and cultural norms that affect maternal health in a maternal and child health dialogue.
- **Coaching and mentorship** visits were conducted in 46 health facilities in the 6 districts. These focused on community-led birth preparedness.
- **Learning sessions** were conducted for facilities in 6 SMGL districts and communities, participants included VHTs, health workers, and district officials.
- **Engaging TBAs** to promote institutional deliveries: In Apac District, 430 TBAs were mapped in 10 sub counties, held a dialogue with 96 TBAs and 37 were integrated into the community improvement work who have now become birth companions.

Section 3: ASSIST Above-Site Technical Assistance

Activity 6: Above site TA to improve prevention of HIV

OVERVIEW

During FY16 ASSIST intervened with combination prevention programs aimed at improving HIV prevention through HIV counselling and testing (HCT), prevention of mother-to-child transmission (PMTCT), and Safe Male Circumcision (SMC) and supporting the prevention of risky behavior in key and priority populations. To achieve these objectives ASSIST worked with health facility improvement teams to put in place systems that would lead to improvement. Strategies included; Continuous Quality Improvement and spread, improved coordination and work with MoH, and building capacity of IPs in continuous quality improvement.

KEY ACCOMPLISHMENTS AND RESULTS

HIV Counselling and Testing (First 90)

- **Onsite coaching visits to the 30 health facilities were conducted, teams charged with carrying out improvement effort were formed and were supported in identification of gaps and initiation of improvement projects focusing on targeted PITC (POC within health facility & 4 community sites) and successful linkage of positive clients to chronic care (Q1-Q2).**
- **Improvement in team functionality:** At baseline (Oct, 2015), 67% of 30 supported health facilities had no functional teams, by February, 2016 this had improved by 37%. Current performance using the maturity index score for team functionality is summarized in figure
- **Improving proportion of clients tested for HIV who have been reached through PITC at the targeted units in the Health Facility:** During the baseline assessment in October, 2015 the biggest gap in PITC identified was incomplete documentation and lack of appropriate HCT registers. So, during the baseline data collection exercise site teams were supported and provided with on job mentorship on how to accurately update the HCT registers and also advised the IPs to provide the appropriate registers to the health facilities.
- **Continued spreading of HIV COR work to 34 other sites in Northern Uganda (Q4).**

Key results:

- **Proportion of clients tested for HIV who have been reached through PITC at the targeted units has continued to improve from 50 (May 2015) to an average of 230 individuals per month.** This has resulted in higher yield of HIV-positive individuals being identified, from 40% in June 2016 to 70% in July 2016 and improved linkage of identified positives to care: the percentage of positives identified who were successfully linked to care increased from 70% in May 2016 to 90% in July 2016. Tested changes included CME on use of HCT register and PITC policy, identified focal person to update the HCT register, and availing test kits to the entry points of care.

PMTCT: Reduce mother-to-child transmission of HIV and improve the quality of eMTCT services

- **To understand the gaps and establish baseline results in PMTCT care and the quality of services, between November and December 2015, a comprehensive baseline assessment was carried out in 23 health facilities.** The baseline, assessed the functionality of the mother-baby care points, availability and functionality of QI teams alongside the baseline results of selected indicators. Other issues identified which affect the quality of services included incomplete and inaccurate recording of tools, health workers were not knowledgeable about the different codes.
- **In December 2015, ASSIST held an IPs meeting which brought together the IPs including HIWA, RHITES SW, STAR E, STAR EC and ASSIST North for coordination and consensus building.** The objectives of the meeting were to: Share and discuss baseline assessment findings; identify key areas for prioritization; discuss usage of the PMTCT dashboard; agree on key follow-on activities to support the health facilities.

- **Prioritization of improvement areas:** Through a process of consensus building, the IPs agreed to focus on the following areas at site level: improve data quality, improve HIV testing and retesting in ANC, improve initiation of Option B+, improve testing at 18 months and ensure that all infants have a documented outcome at 18 months. By focusing on each of these indicators will be able to support the areas of identification, initiation, retention and outcome monitoring so that more babies who are retained in care have a final documented status at 18 months.
- **Use of the dashboard:** The dashboard was reviewed and some amendments made to include further indicators. It was agreed that all IPs will use the dashboard to support additional sites and that this will form the basis for discussions in our quarterly review meetings; again this is activity provided an opportunity for ASSIST to support the institutionalization of the dashboard.
- **In December 2015, in support of building the capacity of IPs and institutionalization:** the MOH carried out a Training of Trainers (TOT) on retention cohort monitoring for key PMTCT IPs. ASSIST facilitated sections of this training such the use of a QI approach to improve site-level indicators; the use of documentation journals and starting up improvement work. ASSIST also shared the PHFS change packages and demonstrated how these could be used to improve certain eMTCT areas and indicators. This particular activity further enabled ASSIST to spread and institutionalize the use of change packages developed through the PHFS work.
- **TA to other IPs to spread PHFS work:** Between 2nd and 4th December, ASSIST facilitated a district-led learning session between 18 spread sites and 4 demonstration sites (22 health facilities) in Tororo district supported by TASO. Jointly facilitating learning sessions is a key mechanism for spread of the PHFS work as well as for building the capacity of IPs and district QI coaches to apply QI in their work and to support QI teams. With guidance from ASSIST, the Tororo DHO has established 6 district mentoring teams to support all the sites on a monthly basis.
- **Institutionalization of the PMTCT dashboard to be used by IPs:** ASSIST developed a prototype dashboard to be shared and used amongst partners. The MoH, CDC, USAID and IPs reviewed the dashboard through a series of consultative meetings and it was adopted (Q2).
- **Partner coordination meeting:** ASSIST supported the MoH to conduct a PMTCT M&E partners' meeting on 11th March 2016. The purpose of this meeting was to, amongst other objectives, update partners on the dashboard and indicators, discuss the use of the longitudinal ANC register and provide updates on the birth cohort monitoring training.
- **Building the district's capacity for sustainability:** 2 coaches' meetings were held in January (12-13th) and February (4th-5th) 2016. The aim was to orient the coaches on key QI tools and approaches, share the PMTCT indicators and plan for subsequent coaching visits.
- **Baseline assessment in 8 Northern facilities and 6 STAR E health facilities:** Between February and March 2016, the purpose of the baseline assessment was to establish the quality gaps, determine the presence of QI teams and set them up where necessary, support sites to develop improvement objectives.
- **Collaborative coaching visits:** In February 2016 coaching visits were conducted in 11 health facilities (4 in STAR EC and 9 in Northern Uganda). Another round of coaching visits was also carried in 16 Northern Uganda sites in March 2016. The coaching visits were focused on supporting sites to improve data quality, improve retention of mother-baby pairs, improve early ANC retention and improve rapid testing for infants at 18 months.
- **Additional activities carried out included:** baseline assessment, first learning session for 6 RHITES SW sites, and coaches' review meetings aimed at improving their coaching skills.
- **Peer-to-peer learning sessions:** 4 peer-to-peer learning sessions were held in February and March 2016 to improve collaborative learning, 26 facilities from the various IPs benefited. The objectives of these learning sessions were to: share baseline findings, prioritize areas for improvement, develop a common learning agenda, introduce collaborative learning to the improvement teams and develop action plans for the next months and prioritization of Improvement work.
- **A PMTCT coaches' orientation and review meeting took place aimed at improving coaching skills and competencies** (Aug 2016).

- **ASSIST is currently spreading the lessons learnt from the PHFS to 117 sites in northern Uganda.** To date, 75 sites have been reached using wave sequencing, with the remaining sites to be reached in the next two years.

Results:

- **All 75 sites in the 3 PHFS spread waves registered improvement in the provision of a standard package of care for mother-baby pairs attending the clinic monthly (Wave 1 from 36% to 89%, Wave 2 50% to 88% and Wave 3 18% to 76%) (Figure 79).**
- **Sites worked on improving retesting of HIV negative women as a key prevention intervention that enables identification of newly infected women as well as those who sero-convert during their pregnancy.** Between May and August 2016, retesting improved from 40% to 83% (Figure 80). Most sites started retesting at ANC points instead of sending women to labs. Other sites started ordering for kits early enough, while for a few that lacked skills in testing were oriented. Retesting of HIV negative women is a key prevention intervention and enables health workers to identify newly infected women as well as those who sero-convert during their pregnancy.

Figure 79. Uganda: Percentage of mother-baby pairs who receive a standard package of care, 75 Wave 1, 2, and 3 PHFS spread sites, Northern Uganda (July 2015 – Aug 2016)

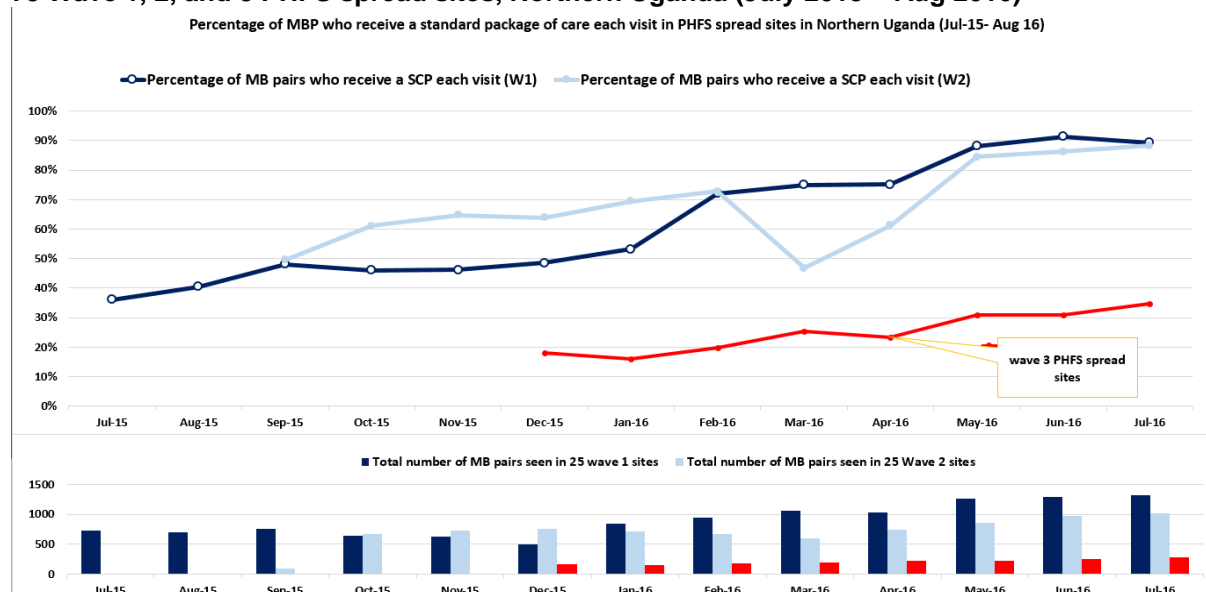
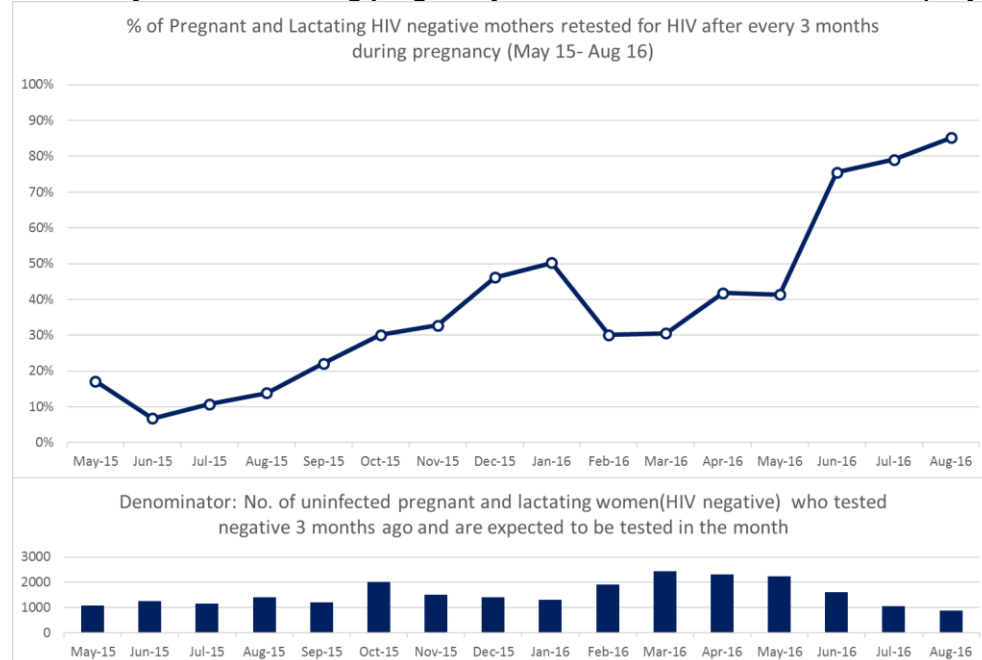


Figure 80. Uganda: Percent of pregnant and lactating HIV negative mothers retested for HIV after every 3 months during pregnancy in 37 PMTCT collaborative sites (May 2015 – Aug 2016)



Improve the quality and safety of SMC

- **Between November and December 2015, SMC quality assessments were conducted at 58 health units** (45 were baseline and 13 were at old sites that still classified as priority). The remaining 35 sites were not assessed because their IPs have not yet commenced SMC activities this FY. The baseline assessments at the new sites revealed:
 - Poor performance on the quality standards and performance indicator
 - Absence of trained teams remains a big challenge
 - Majority of the new priority sites are at the level of HC III and thus will need great support to meet the required standards.
- **Carried out coaching visits to the 89 health facility SMC QI teams** which led to the accomplishment of the following: implementation of action plans, improving data quality, and introduction of tetanus toxoid vaccination (Q3).
- **Held the SMC stakeholders meeting** during which MoH and PEPAFR together with IPs shared on the implementation of tetanus toxoid vaccination in SMC. Key issues included: training staff on new guidelines for tetanus toxoid vaccination, commodities for the intervention, communication to the public on tetanus toxoid vaccination during SMC, sites' readiness in integrating the intervention in SMC program, and foreseen challenges (May 2016).
- **Conducted site assessments of quality of SMC services at 35 health facilities in Northern Uganda.** During the assessments, sites were supported to identify areas for improvement and develop action plans to address the gaps identified. All sites were provided with the new SMC tetanus vaccination policy and supported to set up systems to document and track the tetanus toxoid data for SMC and begin QI projects across various indicators (Q3).
- **Sharing of Uganda VMMC CQI results with USG staff and partners:** Dr. John Byabagambi presented at OHA on the ASSIST Uganda journey for integration of CQI in VMMC (June 21, 2016). Dr. Byabagambi also presented on the management of adverse events; linkages to others services in VMMC programs; and tetanus risk mitigation measures in a global PEPFAR-sponsored VMMC CQI Webinar (June 22, 2016).

Key results:

- **Improved percentage of clients with documented informed consent prior to circumcision.** Health facilities have been working to address gaps with documentation of consent prior to

circumcision which was a challenge in a number of sites including St. Apollo Health Centre IV, a private health facility. At the baseline in December 2015, only 52% of circumcised clients had documented consent prior to the procedure and currently in May 2016, the site has 100% of clients with documented consent prior to circumcision. This is similar at the other 29 health facilities with 100% of circumcised clients with documented informed consent prior to circumcision in May 2016.

- **Sites continued to work on improving clients receiving 2nd dose of TT and circumcision.** There has been improvement from 31% December 2015 to 76% in August 2016 (**Figure 81**).
- **Improved data quality in SMC client records:** Health facilities in northern region were supported to initiate projects on improving data completeness in the SMC client forms. Sites tested changes as shown in **Figure 82**. Data completeness in SMC client forms has improved from 0% Feb 2016 to 56% August 2016. Additional support will be provided until documentation issues are minimized.

Figure 81. Uganda: Percentage of clients that returned for 2nd dose of TT vaccine and circumcision, 92 SMC sites (Dec 2015 – Aug 2016)

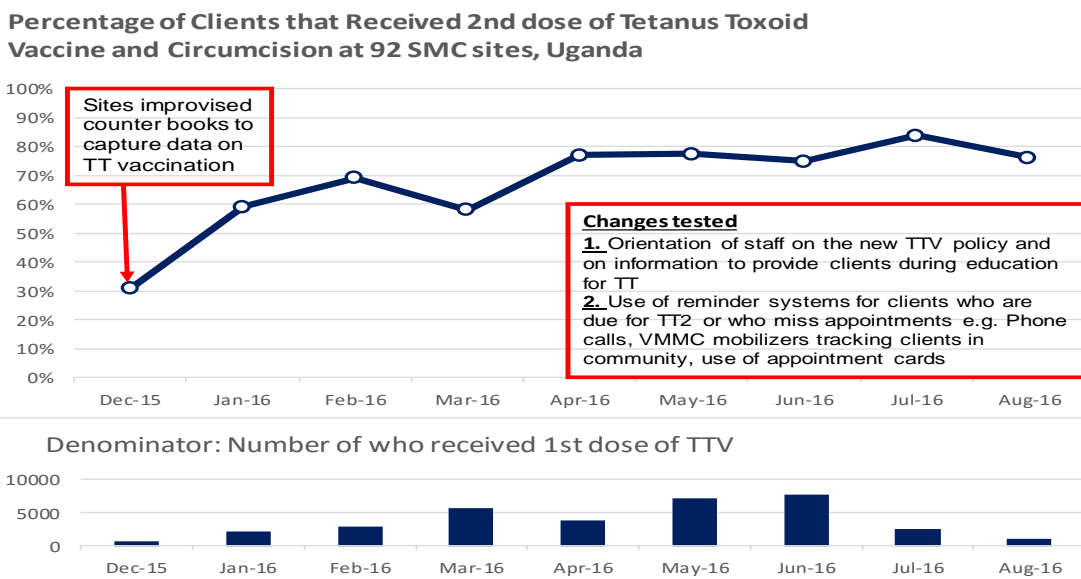
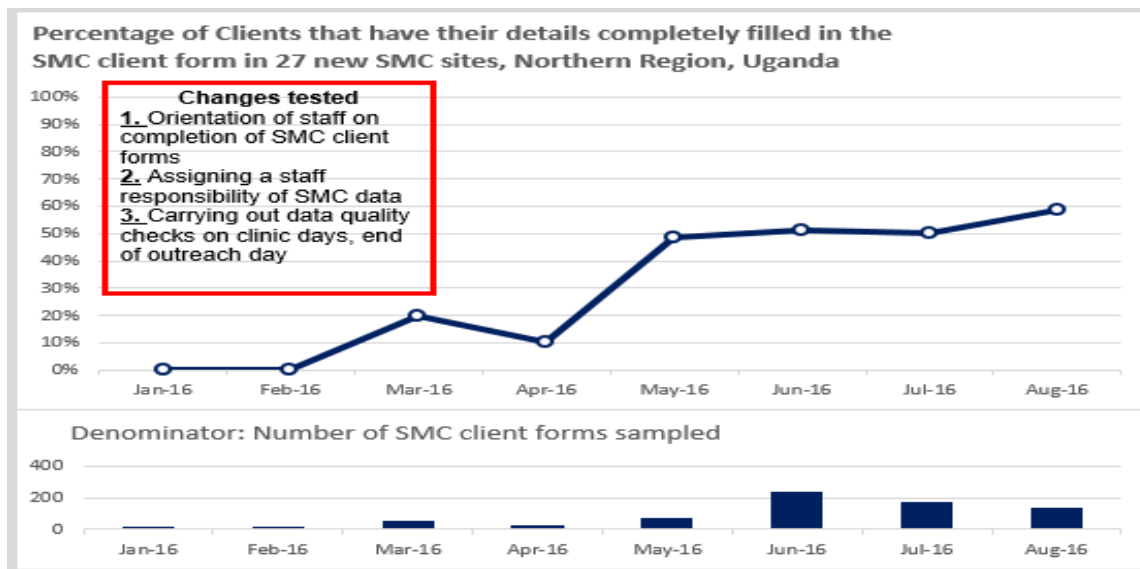


Figure 82. Uganda: Percentage of clients that have their details completely filled in the SMC client form, 27 new SMC sites, Northern Region (Jan – Aug 2016)



Behavioral Interventions: Improve HIV prevention among key populations and adolescent girls and young women (AGYW) aged 10-24 years

- **ASSIST conducted a stakeholders’ meeting to orient IPs on the Stepping Stones methodology and engaged them to support the implementation in November 2015.** The meeting was attended by USAID, CDC HIV prevention technical leads, chiefs-of-party of nine USG-supported IPs and their key technical staff. ASSIST facilitated the review of content of the Stepping Stones manual by IP technical staff and recommendations were made for the adaptation process.
- **Conducted a training needs assessment with 5 out of the 9 IPs (STAR EC, STAR E, SDS HIWA, and RTI projects) to understand how they work with the target population and assessed capacity to undertake the Stepping Stones methodology within their HIV prevention programs.** In December 2015, ASSIST conducted a ToT for nine IPs to build their skills in the Stepping Stones methodology and also discussed the implementation mechanisms. The training of trainers was also used to pre-test the adapted manual and feedback from the participants and trainers will be incorporated in the improved version. 19 trainers for Stepping Stones were capacitated, and joint work plans have been developed.
- **ASSIST supported 6 IPs (SDS, STAR-EC, MUWRP, HIWA, Mildmay, and RSHP) to participate as trainers in the training of 26 community based facilitators for stepping stones in January 2016.**
- **Conducted joint community entry meeting with 3 IPs (Mildmay, STAR EC, MUWRP) in Mubende, Mayuge, and Bugiri districts among commercial sex workers (CSWs), fisher folk, and pastoralist communities (February 2016).** At all these meetings, key district personnel including DHO, Community Development Officers, and DHE actively participated. The meetings provided a platform to introduce to the communities the upcoming activities, explore challenges faced by the communities in accessing and utilizing HIV prevention interventions, and discuss what changes they would like to see happen and their roles in implementing the changes.
- **Participated in the DREAMS initiative district stakeholders meeting in Gulu;** the meeting provided an opportunity for the different IPs in the region to share their implementation strategy in supported districts (Q2).
- **Facilitated training in QI for HIV prevention for peer facilitators of STAR -EC and Mildmay target communities (CSWs, fisher folk, and pastoralists) in Mayuge, Bugiri, and Mubende districts (March 2016).** The peer facilitators trained (64 for STAR-EC and 54 for Mildmay) will

work with their peers to support behavior change and improve access and utilization of HIV prevention services in their respective communities. The peer facilitators were also supported to develop plans for implementation of HIV activities that aims to influence behavior change of peer groups towards access and utilization of HIV prevention services in their respective communities. Conducted a training of facilitators of HIV prevention in the community for 20 uniformed personnel in collaboration with RTI. The trainers will build capacity and support their peer educators to deliver HIV prevention trainings in their communities aimed at improving behavior change and access to and utilization of HIV prevention services.

- **Developed a draft community training manual for HIV prevention for target populations.** Improvements on the manual are ongoing with engagement and feedback from target populations (Q2).
- **Conducted community entry meetings for 6 out of the targeted 15 communities (pastoralists, commercial sex workers, and fishermen).** The meetings were used to meet the key community stakeholders to discuss challenges faced by the community in accessing and utilizing HIV prevention interventions and the role of community in addressing these challenges (Q2).
- **In the 4 communities, 118 peer facilitators were trained.** Each of the peer facilitators will reach out to at most 10 of their peers with information and activities on HIV prevention. Each community was supported to form a QI team that will work continuously work on collection and use of data to improve prioritized areas (Q2).
- **59% of supported adolescent girls and young women from the 10 supported communities attended all 10 Stepping Stones sessions.** In eight of these communities, synthesis of information to identify predominant risky behaviors, root causes of and strategies to reduce risky behaviors, actions to be taken by the peers, and support required from the communities was done.
- **Supported 83 peers in Gulu and 11 peers in Lira to undergo a two-day training on generating business ideas in preparation for support of seed money to fund group income-generating activities (IGAs) by SDS Project (Aug 2016).**
- **A service clinic day was organized, and 62/79 peers accessed HIV prevention services package at Bardege HC III in Gulu District.** All 62 were found HIV negative, and 9 accepted to take up contraceptives (Aug 2016).
- **Initiated structured sessions in two communities in Gulu to engage caregivers and male partners to support AGYW as well as play an active role in addressing social norms that increase risk of HIV (Aug 2016).**
- **In 8/12 communities, peer groups were supported to start up voluntary savings and loan associations (VLSAs), three of which have been registered at the sub-county. The peers continue to attend weekly meetings to make their weekly contributions as well as discuss plans to improve their well-being (July 2016).**
- **In 8/12 communities, AGYW peers reported that they preferred to access condoms from their peer facilitators (July 2016).** Since then peer facilitators have been continuously supplied with condoms by the CSOs.
- **The community QI teams (in 8/12 communities) conducted meetings with parents and caregivers to discuss how they can improve support for the AGYW (July – Aug 2016).**
- **To improve proportion of AGYW who have received a DREAMS core package of services, ASSIST has collaborated with CSO to ensure services are accessible to the peers.**

Results:

- By the end of the year in 11/12 communities 75% (495/662) of peers had a known HIV status; in 10/12 communities 41% (256/620) AGYW peers are using contraceptive mix (**Figure 83**), and 33% (206/620) are engaged in IGAs. Referrals have been conducted for peers to access services at the nearest health facilities while in communities where the health facilities are far, integrated outreaches have been conducted. Two communities have low access to HIV testing mainly due to coordination problems with the health facilities to provide services.

HIV prevention targeting other key populations

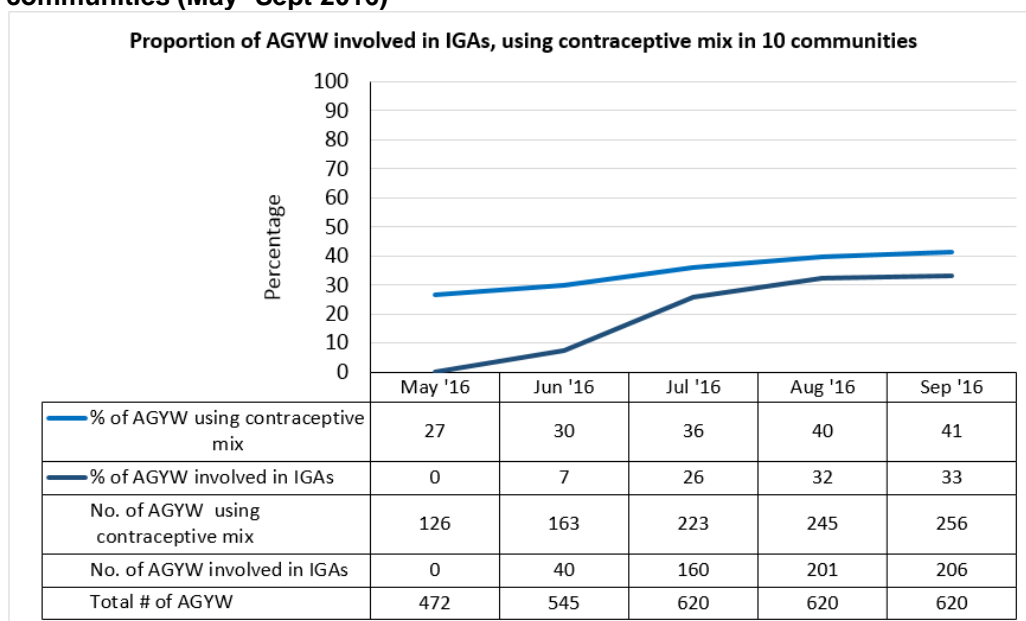
- **3 rounds of coaching visits to the communities were conducted (Q4).**

- In the 6 supported communities, the community QI teams have worked with CSOs and health facilities to improve access to services through community outreaches and where possible referral to services.

Key results:

- 76% (198/259) targeted persons completed all 10 sessions of the Stepping Stones sessions;
- 85% (220/259) in September 2016 have a known HIV status
- Proportion of peers who know their partner’s HIV status increased from 18% (13/70) in July 2016 to 42% (38/89) in September 2016.
- Proportion of female peers who started using family planning methods of their choice increased from 42% (41/94) in July 2016 to 50% (59/119) in September 2016.
- All 29 persons who tested HIV-positive were linked and enrolled in HIV care at the nearest health facilities in September 2016.
- In 4/6 communities, the number of peers who are engaged in income-generating activities has increased from 14% (20/134) in July 2016 to 24% (46/189) in September 2016.

Figure 83. Uganda: Proportion of AGYW involved in IGAs, using contraceptive mix, 10 communities (May -Sept 2016)



Activity 7. Above-site TA to improve care and treatment for people with HIV

OVERVIEW

During FY16, USAID ASSIST worked with USAID-supported health facilities in the East, East Central, North, and South Western regions of the country to spread best practices / knowledge harvested from its HIV COR collaborative / demonstration. The spread work involved baseline assessment of the spread facilities and later engaged the facilities in monthly coaching visits to continuously improve quality of HIV care with IPs and district stakeholders. We worked with 6 implementing partners: HIWA, STAR E, STAR EC, RHITES, UPHS, and NUP.

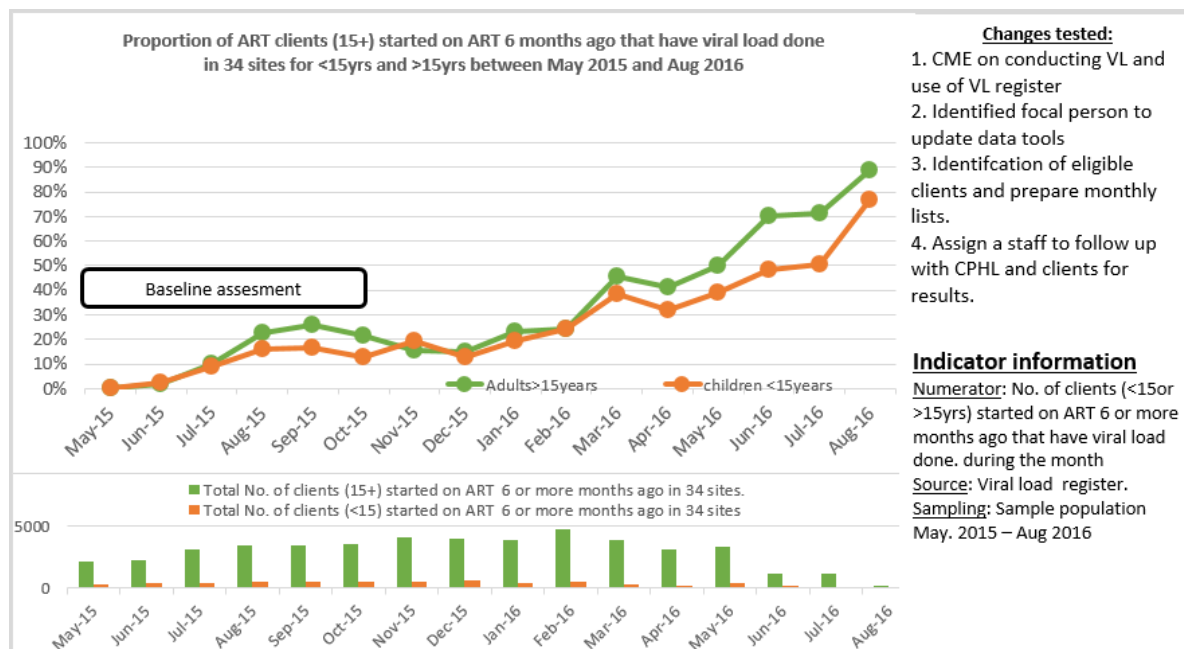
KEY ACCOMPLISHMENTS AND RESULTS

Improve HIV/ART care and treatment services

- Supported the MOH to conduct planning meetings for the review of the National Quality Improvement Framework and Strategic Plan (QIF&SP) 2015/16 -2019/2020 so that it’s aligned it with the new Health Sector Strategic and Development Plan (HSSDP) 2016-2020 (Q1-Q2).

- **ASSIST was involved in the review of National Support Supervision guidelines (NSSGs) in October 2015.** This was aimed at supporting QAD in revising the current NSSGs, so that they are aligned with the new HSSDP (2016-2020).
- **ASSIST held a stakeholders meeting to create common understanding of the HIV/ART Care and Treatment PEPFAR Country Operating Plans (COP 15) objectives and scope.** As a result; a joint work plan, collaborative indicators, health facilities and finalization of memoranda of understanding (MOUs) were agreed on (October 2015).
- **In November 2015, baseline data collection for the improvement activity indicators was conducted in the 30 health facilities provided by 5 IPs,** one IP, Regional Health Integration to Enhance Services (RHITES-SW) had not shared participating facilities. The baseline was to help ASSIST and IPs to identify problems and to establish baseline results. ASSIST prepared the data collection tools, pretested them, identified and coached data collectors, while the IPs also participated in the actual data collection. Other than establishing baselines for the selected indicators, key findings in all the health facilities were related to incomplete documentation of the various the MOH registers.
- **ASSIST supported 5 US G partners (STAR E, STAR EC, HIWA, Northern Uganda, and UPHS) to implement QI initiatives in 30 health facilities across the country.** Joint coaching activities were carried out to follow up and support site teams to implement QI projects to improve HIV care and treatment services focusing on identification of positives through provision of targeted PITC both at health facility and at community, successful linkage into care, adherence and retention on ART, and CD4& viral load monitoring. During the coaching, follow-up on action plans made by the sites was made. Sites were supported to synthesize some of the tested changes that could lead to improvement. Coaches worked with teams to further review baseline performance to identify gaps and make joint plans to address them (Q1-Q4).
- **The facility-community collaborative also conducted coaching sessions to 4 health facilities in the Eastern Central region (Banda HC III, Wabulungu HC III, Namungalwe HC III and Kityerera HC IV) with 4 CSOs (FOCREV, SEPSPEL, WACA, BACHI) to support sites to use QI to identify gaps in identifying and enrolling HIV positive OVCs and test changes to close them (Q4).**
- **Provided onsite support for QI work by conducting joint coaching with members of MOH, Quality Assurance Departments of Regional Referral Hospitals, District Health Teams and Health Facilities and the respective IPs. Findings of coaching visits were shared with supervisees and in addition with the respective IPs for action (Q1-Q4).**
- An upward trend in the performance was observed the proportion of clients of ART eligible for viral load test that had it done improve from 10 % (Oct, 2015) to 90% (Aug, 2016) among individuals >15yrs and 80% for individuals <15yrs (**Figure 84**).

Figure 84. Uganda: Proportion of ART clients (<15 and 15+ years) started on ART 6 months ago that have viral load done, 34 sites (May 2015 – Aug 2016)



Orphans and vulnerable children

- **ASSIST, in collaboration with MGLSD, organized a partner’s meeting in September 2016 for partners to share progress of QI activities and develop joint QI plans.**
- **To improve the wellbeing of vulnerable children, the focus for July-Sept 2016 was to spread lessons learnt to more communities to improve identification of HIV positive individuals in the community, link and support them to be retained in HIV care, and identify HIV-positive OVC who have dropped out of care and ensure they are re-enrolled and retained in HIV care.**
- **ASSIST supported QI training of 95 staff from 22 CSOs (11 CSOs supported by Sustainable Outcomes for Children and Youth and 11 CSOs supported by SCORE) (Q4).**
- **ASSIST conducted joint QI coaching visits with UPHS (4), Better Outcomes (3), and Sustainable Outcomes project (1) in 8 districts of Iganga, Bushenyi, Sheema, Kamuli, Apac, Masaka, Luwero, and Jinja (Q4).**
- **In collaboration with Catholic Relief Services (CRS), ASSIST conducted QI training for 32 staff of the 3 regional partners of the Sustainable Outcomes for children and Youth project.** The training’s focus was to orient the staff on the basics of QI and their roles as managers in supporting QI implementation in the project. ASSIST will be working with the trained staff in joint activities in the selected districts of Kibaale, Bushenyi, and Luweero to further build their QI capacity (Q1).
- **Conducted 2 joint QI coaching sessions at 4 UPHS-supported CSOs.** The CSOs were supported to form QI teams, collect and compile data on selected indicators, review performance and prioritize quality gaps for immediate attention. The teams were supported to review functionality of community networks such as VHTs, parasocial workers, community monitors and other in relation to identification and linkage of OVC and caregivers to health facilities for HIV services (Q1-Q2).
- **Adopted indicators to measure of performance in identification, linkage and enrollment in HIV care for the supported OVC and their caregivers.** This was important as it would enable uniform and collaborative measurement of improvement. ASSIST piloted the indicators at 2 CSOs to identify the data sources. During this process, we modified the CSO home visit tool to include

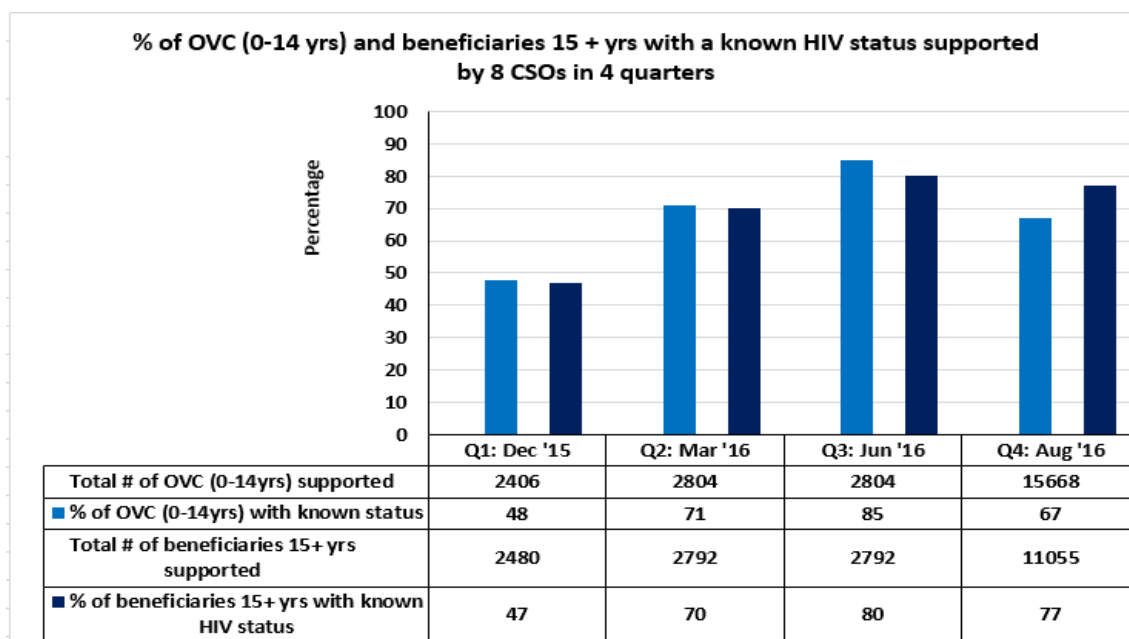
information on adherence to ART and retention in care for the HIV positive OVC and their caregivers (Q1).

- **Baseline data collection was carried out in 4 CSOs; namely KARERA, KIMOSI, FICHI and Caring Hands (Q1).** Results from the 4 CSOs showed:
 - Few of the supported OVC and their caregivers had a known HIV status; On average 37% (896/2406) OVC (0-14 years) and 32% (809/2545) direct beneficiaries 15+ years had a known HIV status.
 - CSOs had limited information whether the HIV-positives linked to care were still in care. Mechanisms were put in place for the CSO to obtain information on HIV-positive OVC active in care; 75% (41/54) OVC (0-14years) and 79% (232/291) direct beneficiaries 15+ years were active in HIV care.
- ASSIST supported the teams identify possible causes and test changes to close the quality gaps.

Key results:

- **At 8 supported CSOs, number of OVC and caregivers with known HIV status has steadily improved.** In this year, although the proportions have decreased absolute numbers show that more OVC and caregivers have been supported to access HIV testing services. The use of a case-finding tool to identify more positives in the community and link them to HIV care has been successful. Teams have also improved in finding HIV positive individuals out of care and supporting their retention in HIV care. By end of August 2016, 80% (45/56) children aged 0-14 yrs were identified and re-enrolled as well as 73% (53/73) individuals aged 15+ yrs (**Figure 85**). Retention in HIV care for all newly identified HIV positives and those re-enrolled in care has been registered at 96%(110/114) children (0-14yrs) and 99% (111/112) individuals 15+yrs.

Figure 85. Uganda: Percentage of OVC (0-14 yrs) and beneficiaries (15+ yrs) with a known HIV status supported by 9 CSOs (Dec 2015 – Aug 2016)



Activity 8. ASSIST above-site TA to improve family health (TB, Nutrition, MNCH)

OVERVIEW

During FY16, USAID ASSIST in collaboration with the relevant MoH divisions, supported IPs, DHOs and health facilities worked to improve TB, MNCH, and nutrition services. This was achieved through: joint on-site coaching visits, quarterly peer-to-peer learning meetings, and sharing of reports and knowledge management products so as to provide guidance to improvement work in the supported districts. Health facilities were supported to identify gaps in the technical areas and

applied improvement approaches to address these gaps

KEY ACCOMPLISHMENTS AND RESULTS

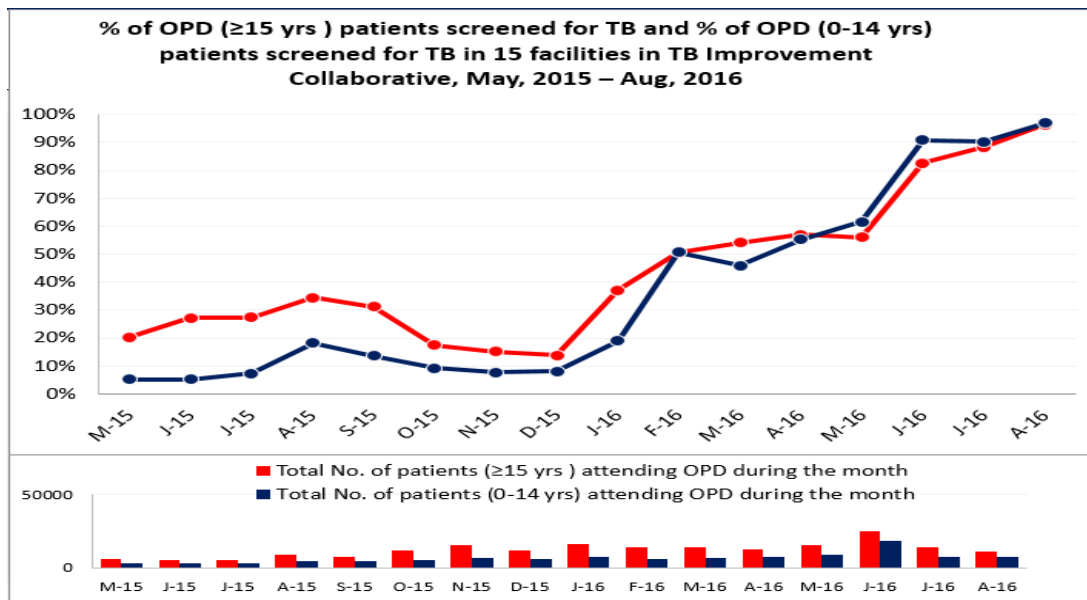
Improve management of TB

- Two rounds of site coaching visits were carried out focussing on improving documentation, TB assessment, HIV testing, follow up and house hold contact (July – Aug 2016).
- Organized a TB harvest meeting in which 12 Diagnostic & Treatment Units (DTUs) with 22 health care workers and was focused on areas of Improving TB assessment, TB data quality, Sputum follows, GeneXpert utilization and household contact tracing in TB Care and Treatment (Sept 2016).

Results:

- Noticeable improvement was seen from less than 10% at baseline to 90% in August 2016 of TB patients screened for TB at the OPD (Figure 86). Tested changes included orienting staff on TB screening using the ICF guideline, assigning a staff to review TB assessment at the dispensary and weekly reviewing of TB assessment in OPD register and sharing information with staff. The result of improved screening was cases notified improved from zero in May 2015 to 114 in August 2016. Similar improvements have been achieved in areas of P-BC TB cases who had a sputum smear follow up done at 2 and 5 months.

Figure 86. Uganda: Percentage of OPD patients (0-14 years and ≥15 years) screened for TB, 15 facilities in TB Improvement Collaborative (May 2015- Aug 2016)



Improve the quality of maternal newborn health services

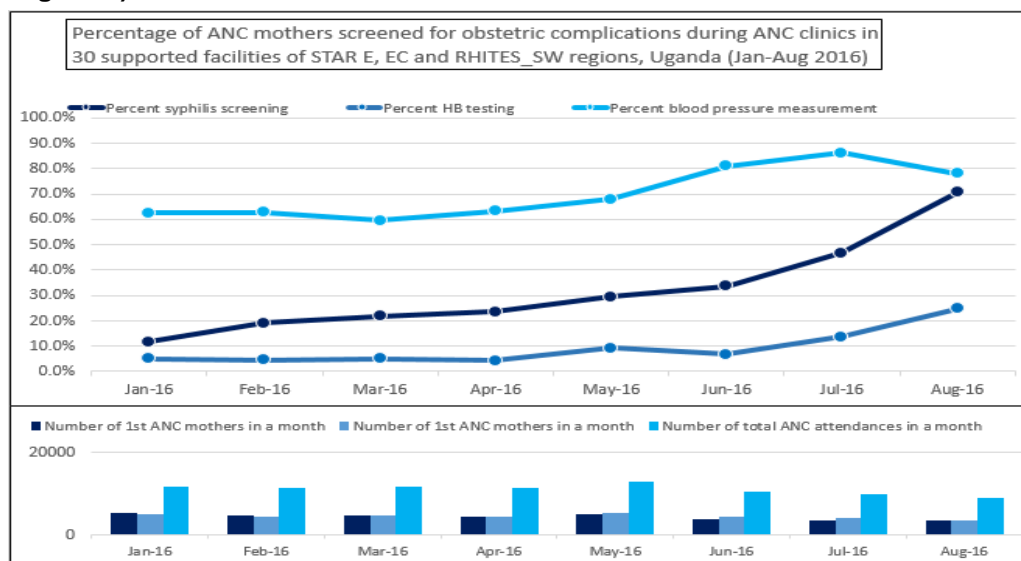
- Disseminated the Newborn Resuscitation assessment results at the Newborn Technical Working Group meeting at the MOH (Q4).
- Engaged MOH staff, Reproductive Health and Child Health divisions in QI activities in the field, both in Northern Uganda and IP-supported sites (Q4).
- Engaged with WHO to discuss way forward regarding the WHO QoC Initiative to improve MNCH outcomes (Q4).
- Facility-based MNCH improvement teams (30) were supported onsite to continue building the skills of health care providers to provide quality maternal and newborn care services (Q4).
- Monthly onsite coach visits have been made to the 30 supported facilities (Q4).

- A second learning session was conducted for 20 high-volume facilities of STAR E and EC regions to further share and spread learning across the participating health facilities (Q4).
- A first learning session was conducted for the 10 supported facilities of RHITES-SW to share baseline assessment results and support teams identify improvement projects to work upon to improve the quality of maternal and newborn care services provided (Q4).

Improving the quality of antenatal care

- **Figure 87 shows increases in the percentage of ANC mothers screened for obstetric complications during ANC clinics.** Tested changes included:
 - Setting an observation table with a well-equipped tray at the booking area in the ANC clinic to take all necessary observations for mothers.
 - Bleeding ANC mothers once, test for HCT and RPR within the ANC clinic but send the remaining sample to the lab for HB estimation.
 - 30 sites were supported improve the quality of labor and delivery care building on the lessons learnt from the SMGL program.
 - Sites also tested changes to improve newborn care services MPDRs.

Figure 87. Uganda: Percentage of ANC mothers screened for obstetric complications during ANC clinics, 30 supported facilities of STAR E, EC and RHITES, SW regions, Uganda (Jan – Aug 2016)



Improve nutrition in the first 1000 days for mothers and babies

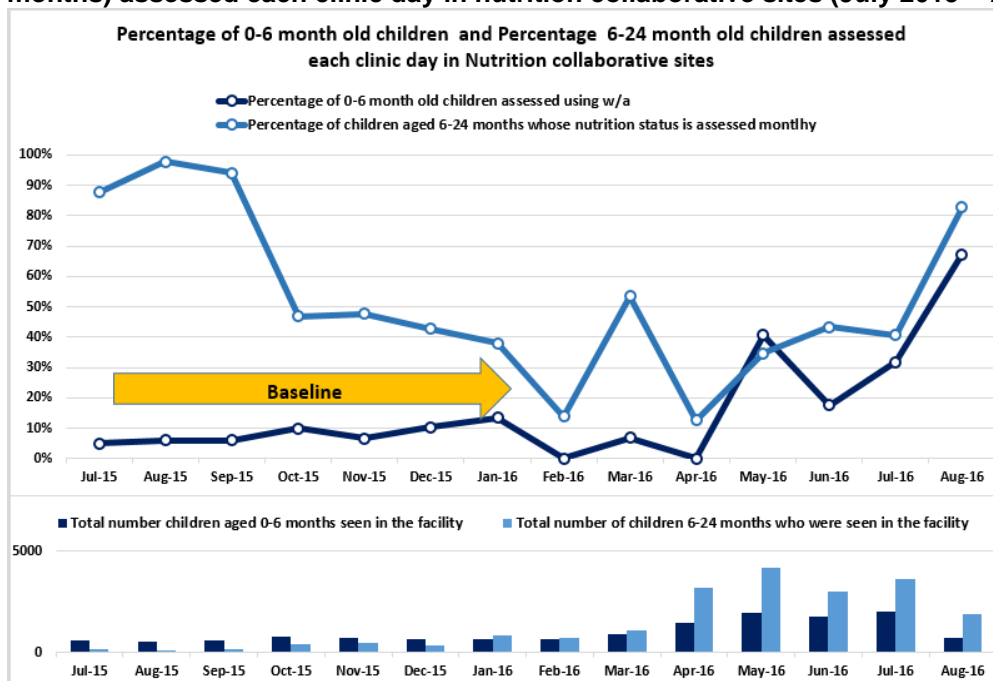
ASSIST is working with three IPs (North, HIWA, and RHITES SW) in 16 health facilities in 14 districts in northern, southwestern regions as well as Police health centers.

- A second nutrition learning session for 16 supported sites was held successfully. The health facility teams shared experiences, challenges and opportunities to improve nutrition in the 1st 1000 days (July 26-27, 2016).
- Health workers at Nsambya HCIV, one of the 6 BFHI sites, were trained in BFHI by national trainers, to build the knowledge and skills necessary to transform their health facility into a baby-friendly institution were passed on (Aug 2016).
- Coaching visits were carried out in all supported health facilities to address data quality, and assessment of children aged 0-6 months (July – Aug 2016).
- This year the health facilities focused on improving these two areas, which have proved a challenge to most improvement teams due to the lack of tools to calculate the Z scores, staff not knowing how to do assessments, no recording tools.

Results:

- Nutritional assessment of children 0-6 months reached 67%, and for children aged 6-24 months it reached 83% in August 2016 in 8 sites (Figure 88).** The number of children seen in the facility who are assessed has increased as staff also started doing assessment in the YCC and OPD clinics. Tested changes included:
 - Sites were provided with the necessary job and demonstrations done.
 - Recording Z scores in the clients' book and then transferring them to the register.
 - One staff assigned to support assessment every clinic day.
 - All MUAC taken and recorded during triage before the clients being seeing the clinician in OPD.
 - Triage nurse in OPD to assess all nutrition parameters of children 6-24 months and record in the client book before the client goes to see the clinician.
 - A staff assigned to follow up for data completeness in registers.

Figure 88. Uganda: Percentage of children (0-6 months) and percentage of children (0-24 months) assessed each clinic day in nutrition collaborative sites (July 2015 – Aug 2016)



IMPROVEMENT IN KEY INDICATORS

Section 1: Strengthened health systems in Northern Uganda

Activity	Indicator	Baseline	Jan-Feb 2016	Last value
Improve HIV prevention	PMTCT (Wave 1)			
	% of mother-baby (MB) pairs retained in care	50% (Oct 2015) 25 Sites	49% (Jan 2016) 25 Sites	60% (July 2016) 25 Sites
	% of MB pairs who receive a standard care package at routine visits	46% (Oct 2015) 25 sites	71% (Feb 2016) 25 sites	89% July 2016) 25 sites
	% of pregnant women who were counselled, tested and given their results (HIV status)	78% (Oct2015) 25 sites	73% (Feb 2016) 25 sites	98% (July 2016) 25 sites

Activity	Indicator	Baseline	Jan-Feb 2016	Last value
Improve family health	Nutrition			
	% of pregnant mothers assessed using MUAC in ANC	80% (July 2015) 11 sites	99% (Feb 2016) 11 sites	100% (July 2016) 11 sites
	% of HIV positive clients who have been assessed for malnutrition using MUAC	74.4% (July 2015) 11 sites	89.6% (Feb 2016) 11 sites	100% (July 2016) 11 sites
	MNCH			
	%age of mothers who developed obstructed labor per month	2.8% (Jul 2015) 28 sites	2.6% (Feb 2016) 20 sites	2.6% (May 2016) 20 sites
	%age of mothers delivering at the facility who were monitored by a partograph	39% (Jul 2015) 28 sites	68% (Feb 2016) 20 sites	91% (May 2016) 20 sites
	%age of live births who received ENBC per month	69% (Jul 2015) 28 sites	76% (Feb 2016) 20 sites	88% (May 2016) 20 sites
	%age of asphyxiated babies resuscitated successfully.	83% (Jul 2015) 28 sites	93% (Feb 2016) 20 sites	96% (May 2016) 20 sites
	FP			
	% of women 15-49yrs counseled on FP in the PNC/YCC in a month	73% (July 2015) 27 sites	82% (Feb 2016) 33 sites	93% (Aug 2016) 26 sites
	% of women 15-49yrs who received an FP method in the PNC/YCC in a month	1% (July 2015) 27sites	13% (Feb 2016) 33 sites	26% (Aug 2016) 26sites
	% of mothers attending Mother Baby care point counseled on FP	1% (July 2015) 27sites	6% (Feb 2016) 33 sites	83% (Aug 2016) 26sites
	% of mothers attending Mother baby care point received FP method	0% (July 2015) 27sites	1% (Feb 2016) 33 sites	19% (Aug 2016) 26sites
	Malaria			
	% of suspected Malaria patients tested for malaria at a facility in a month	71% (Oct 2015) 12 sites	77% (Feb 2016) 12 sites	97 % (Aug 2016) 10 Sites
	% pregnant women with malaria treated successfully	98% (Oct 2015) 12 sites	100% (Feb 2016) 12 sites	99 % (Jul 2015) 10 Sites

Section 2: Northern Uganda Savings Mothers Giving Life*

Activity	Indicator	Baseline (Feb 2015) in 20 high-volume sites	Current (May 2016) – 20 high-volume sites	August 2016 – 20 high-volume sites
20 High volume facilities in Northern Uganda	Active monitoring of labor using a partograph	30%	79%	80%
	C-section rate	14%	12%	14%
	Active management of third stage of labor	56%	100%	99%

Activity	Indicator	Baseline (Feb 2015) in 20 high-volume sites	Current (May 2016) – 20 high-volume sites	August 2016 – 20 high-volume sites
	Postpartum hemorrhage	0.70%	1%	0.4%
	Screening for syphilis for 1st ANC	20% (Jan 2016)	54%	77%
	Syphilis positive cases diagnosed & treated	0% (Jan 2016)	2%	4%
	Screening for anemia through HB for 1st ANC	15% (Jan 2016)	22%	24%
	Anemia cases identified & treated	1% (Jan 2016)	9%	4%
	Screening for Pre-eclampsia using BP in ANC	79% (Jan 2016)	88%	90%
	PIH cases diagnosed & treated	0% (Jan 2016)	0.20%	3%
	Successful resuscitation of Asphyxiated babies	63%	96%	90%
	Provision of ENC package	57%	88%	90%
	Provision of KMC	21%	76%	74%
	Patient Level Indicators for 50/98 in May 2016 and 74/98 in August 2016 scale up facilities of Northern Uganda	Active monitoring of the labor process through partograph use	1%	53% (50 sites)
Active management of third stage of labor		28%	96%	97.1%
Postpartum hemorrhage		0%	0.30%	1%
Successful resuscitation of Asphyxiated babies		0%	50%	78.6%
Provision of ENC package		9%	67%	79.4%
Screening for syphilis for 1st ANC		0%	21%	44%
Syphilis positive cases diagnosed & treated		0%	4%	4.4%
Screening for anemia through HB for 1st ANC		0%	1%	1.5%
Anemia cases identified & treated		0%	0%	8.6%
Screening for Pre-eclampsia using BP in ANC		0%	37%	67.6%
PIH cases diagnosed & treated		0%	0.70%	0.9%

Activity	Indicators	Baseline (Aug 2015)	May 2016	August 2016
SMGL Community	% of mothers attending 1st ANC visits in the first trimester (23 health facilities)	14% (23 sites)	23% (23 sites)	25% (23 sites)
	% of mothers attending 1st ANC visits in the first trimester (lowest performing villages)	33% (118 villages)	39% (118 villages)	47% (58 villages)
	% of women of child bearing age with signs and symptoms of pregnancy tested for pregnancy at the health facility	0% 48 villages	19% (48 villages)	15% (58 villages)
	Number of pregnant women who did not attend first ANC referred to the health facility	0 (118 villages)	197 (118 villages)	100% (58 villages)
	Number of pregnant women with danger signs referred to the health facility	1 (18 villages)	28 (32 villages)	26% (58 villages)
	Number of women delivering at health facilities (23 health facilities)	1,751 (23 facilities)	1,984, (23 facilities)	1,351(58 villages)
	% of women delivering at health facilities (108 lowest performing villages)	0% (108 villages)	24% (108 villages)	75% (57 villages)
	% of pregnant women registered in the community	0% (118 villages)	45% (118 villages)	78 (48 villages)
	% of pregnant women saving for birth expenses	0% (118 villages)	94% (118 villages)	8% (58 villages)
	% of newborn babies with danger signs referred to the health facility	0% (18 villages)	38% (18 villages)	95% (58 villages)
	Number of lactating mothers counselled on proper cord care	0 (8 villages)	(80 villages)	89% (58 villages)
			98	99 92% (58 villages)

*The data collection system is half computerized and half manual. ASSIST is working with the districts to improve quality of the data collected by the health facilities

Section 3: ASSIST MAIN – Above Site Technical Assistance

Activity	Indicators	Baseline (Jul-Dec 2015)	May 2016	August 2016
PMTCT	% of HIV-positive pregnant women who were screened for TB in the review period	81% (18 sites)	96%(19 sites)	99% (26 sites)
	% of HIV-positive pregnant women identified as TB suspects	0%	0% (19 sites)	02% (25 sites)
	% of HIV-positive pregnant women still on treatment 1 month after initiation of ART	55% (14 sites)	72% (21 sites)	83% (26 sites)
	% of HIV-positive pregnant women still on treatment 3 months after initiation of ART	70% (12 sites)	69% (21 sites)	73% (26 sites)
	% of HIV-positive lactating women still on treatment 1 month after initiation of ART	70% (12 sites)	80% (19 sites)	75% (25 sites)
	% of HIV-positive lactating women still on treatment 3 months after initiation of ART	69% (9 sites)	67% (19 sites)	70% (25 sites)
	% of HIV-positive pregnant on ART keeping appointments	64% (24 sites)	72% (21 sites)	77% (26 sites)
	% of pregnant women attending ANC who were counselled, tested for HIV and received their results	83% (14 sites)	90% (21 sites)	98% (26 sites)
	% of pregnant women attending L&D who were counselled and tested for HIV and received their results	86% (17 sites)	90% (21 sites)	87% (26 sites)
	% of lactating women attending PNC who tested for HIV	4% (12 sites)	64% (19 sites)	76% (24 sites)
	Percentage of completely and accurately filled out EID clinical charts	85% (16 sites)	76% (25 sites)	88% (24 sites)
% of HEI tested for HIV at 6 weeks (1st PCR)	61% (30 sites)	67% (24 sites)	85% (25 sites)	

SMC

Activity	Indicators	Baseline (Jul-Dec 2015)		May 2016		August 2016	
		New sites (40)	Old sites (13)	New sites (72)	Old sites (13)	New sites (72)	Old sites (13)
Improving the quality of SMC	Percentage of clients that accept T.T1	93%	96%	97%	90%	100%	100%
	Percentage of clients that receive T.T2 and Circumcision	3%	65%	71%	76%	82%	76%
	Percentage of clients counselled and tested for HIV	93%	81%	100%	92%	100%	99%
	Percentage of HIV+ clients successfully linked to HIV	57%	100%	100%	71%	100%	100%

Activity	Indicators	Baseline (Jul-Dec 2015)		May 2016		August 2016	
		New sites (40)	Old sites (13)	New sites (72)	Old sites (13)	New sites (72)	Old sites (13)
	care						
	Percentage of clients assessed and examined prior to circumcision	99%	100%	100%	98%	100%	100%
	Percentage of clients with documented informed consent prior to circumcision	94%	100%	100%	100%	72%	100%
	Percentage that experience moderate to severe adverse events	1%	0%	1%	0%	0%	0%
	Percentage of clients that return for review within 48 hours after circumcision	80%	96%	92%	59%	94%	99%
	Percentage of clients that return for review beyond 48 hours and within 7 days after circumcision	40%	90%	72%	41%	57%	97%
	Percentage of sites achieving a minimum of 80% compliance on the SMC quality standards	0%	67%	18%	58%	57%	77%

HIV Care and Treatment Services

Activity	Indicators	(30 Northern spread sites)		(34 IP supported sites)		30 Northern	33 IP
		Baseline (Jul-Dec 2015)	May 2016	Oct 2015	April 2016	July 2016	
HIV	% of individuals (15+) tested through PITC	7%	64%	24%	51%	70%, 15 sites	63%, 30 sites
	% of newly tested positive for HIV (15+) who were successfully linked into HIV treatment & care	53%	72%	64%	86%	65%, 15 sites	81%, 30 sites
	% of pre-ART clients newly enrolled in case assessed for ART eligibility by CD4 count (Initial CD4 Count)	46%	53%	40%	54%	58%, 15 sites	66%, 30 sites
	% of patients on ART who are 95% adherent to ARV medicines	84%	98%	81%	89%	86%, 15 sites	92%, 30 sites
	% of ART clients (15+) retained in care	56%	f	67%	75%	71%, 15 sites	80%, 30 sites
	% of ART clients (<15) retained in care	51%	86%	72%	80%	76%, 15 sites	87%, 30 sites
	Proportion of ART clients	12%	60%	22%	42%	63%, 15	83%,

Activity	Indicators	(30 Northern spread sites)		(34 IP supported sites)		30 Northern	33 IP
		Baseline (Jul-Dec 2015)	May 2016	Oct 2015	April 2016	July 2016	
	(15+) started on ART 6 months ago that have viral load done					sites	30 sites
	Proportion of ART clients (<15) started on ART 6 months ago that have viral load done	9%	69%	13%	34%	41%, 15 sites	60%, 30 sites
	% of HIV-positive clients (15+) on treatment for at least six months, with suppressed viral load (<1000 copies/ml)	86%	93%	61%	82%	92%, 15 sites	75%, 36 sites

Level	Indicator	Baseline/ (November 2015)	Last value (May 2016)	July 2016
HIV community facility level indicators	Percentage of OVC referred to the HF that received an HIV test	21/36 (58%) (1 HF reporting)	856/856 (100%) (4HF)	856/856 (100%) (4HF)
	Number of HIV-positive OVC identified	5 (1 HF reporting)	50 (4 HF)	68 (4 HF)
	Percentage of HIV-positive OVC enrolled into HIV care (Positives referred and tested from community)	0%	34/36= 71% (4 HF reporting)	34/36= 71% (4 HF reporting)
	Number of HIV-positive OVC identified and linked to community CSO for services	ND	21 (3 HF reporting)	34 (4 HF reporting)
CSO level indicators	Percentage of HIV-positive OVC linked to health facility for enrolment into HIV care	9/14 = 64% (2 CSOs reporting)	45/63 (71%) (2 CSOs reporting)	82/84 (97%) (4 CSOs reporting)
	Number of HIV-positive OVC identified at the community level	9 (1 CSO reporting)	63 (2 CSOs reporting)	84 (4 CSOs)

TB

Activity	Indicators	Baseline (Jul-Dec 2015) 12 sites	May 2016 (15 sites)	July 2016
TB	% of OPD (>15 years) patients screened for TB	8%	77%	96% (13 sites)
	% of presumed TB cases >15 years evaluated for active TB	96%	85%	81% (14 sites)
	TB case notification rate 0-14 years	0%	43%	54% (9 sites)
	% Household contacts of PBC TB cases screened for TB using the ICF form	44%	100%	94% (9 sites)
	% of confirmed TB cases started on appropriate treatment	100%	100%	100% (15 sites)

Activity	Indicators	Baseline (Jul-Dec 2015) 12 sites	May 2016 (15 sites)	July 2016
	% of PBC TB cases who had a sputum smear follow-up done at 2 months	71%	100%	87%(15 sites)
	% of bacteriologically confirmed TB cases evaluated for treatment at 5 months	43%	75%	79%(14 sites)
	TB treatment success rate (other forms of TB)	92%	90%	80%(15 sites)
	% of HIV positive TB cases initiated on ART	100%	100%	97%(15 sites)
	% completeness of the TB register	55%	83%	87%(14 sites)

OVC

Activity	Indicators	Baseline at 4 CSOs (Oct '15)	Last value (Sept'16)
	Proportion of OVC (0-14 yrs) whose caregivers know their HIV status	37% (894/2406)	66% (10485/15735) at 8 CSOs
	Proportion of direct beneficiaries 15+ yrs with known HIV status	35% (915/2545)	71% (8597/12033) at 8 CSOs
	Proportion of OVC(0-14yrs) identified and referred for testing who test HIV positive	ND	58% (100/173) at 6 CSOs in 39 communities
	Proportion of OVC direct beneficiaries identified and referred for testing who test HIV positive	ND	58% (130/224) at 6 CSOs in 39 communities
	Proportion of HIV-positives OVC(0-14yrs) re-enrolled and active in HIV care	0%(0/0)	80%(45/56) at 39 communities
	Proportion of HIV-positives direct beneficiaries 15+yrs re- enrolled and active in HIV care	0%(0/5)	73%(53/73) at 39 communities
	Proportion of HIV-positive OVC (0-14yrs) enrolled in HIV care	81% (40/49)	90% (849/943) at 8 CSOs
	Proportion of HIV-positive direct beneficiaries 15+ yrs enrolled in HIV care	80% (240/297)	92% (1667/1812) at 8 CSOs
	Proportion of HIV-positive OVC (0-14yrs) who are active in HIV care	100% (40/40)	91%(141/154) at 4 CSOs
	Proportion of HIV-positive direct beneficiaries 15+yrs who are active in HIV care	99% (238/240)	94%(397/422) at 4 CSOs
	Proportion of HIV positive children (0-14 yrs) who have an up-to-date viral load result	0% (0/40)	38% (32/83) at 4 CSOs
	Proportion of HIV positive direct beneficiaries 15+yrs who have an up to date viral load result	0% (0/240)	55% (131/238) at 4 CSOs
	Proportion of HIV-positive OVC with undetectable viral load	ND	94% (32/34) at 4 CSOs

Activity	Indicators	Baseline at 4 CSOs (Oct '15)	Last value (Sept'16)
	Proportion of HIV-positive OVC with undetectable viral load	ND	96% (121/126) at 4 CSOs
	Proportion of OVC households in VSLA saving regularly	85% (110/130) 1 CSO	98% (801/817) at 4 CSOs

Nutrition

Activity	Indicators	Baseline (Jul – Dec 2015)	April 2016	August 2016
Nutrition in the first 1000 days learning session	Percentage of pregnant women attending ANC who receive nutrition assessment	64% (16 sites)	77% (10 sites)	100% (8 sites)
	Percentage of pregnant women attending ANC who receive maternal nutrition counselling	56% (16 sites)	75% (10 sites)	100% (8 sites)
	Percentage of pregnant women attending ANC who receive iron folate	84% (16 sites)	84% (10 sites)	100% (8 sites)
	Percentage of lactating women who receive nutrition assessment using MUAC	35% (16 sites)	88% (10 sites)	100% (8 sites)
	Percentage of lactating women attending maternity/ PNC who receive maternal nutrition counselling	23% (16 sites)	77% (10 sites)	97% (8 sites)
	Percentage of pregnant women receiving 1st IPT dose in the 2nd trimester	66% (16 sites)	87% (10 sites)	86% (8 sites)
	Percentage of pregnant women receiving 2nd IPT dose in the 3rd trimester	47% (16 sites)	81% (10 sites)	82% (8 sites)

MNCH

Patient Level Indicators for 30 ASSIST supported facilities of STAR EC, E and RHITES_SW regions of Uganda				
Activity	Indicators	Baseline (Jan 2016) %, 30 facilities	May 2016 %, 20 facilities	August 2016, 20 Sites
Improve the quality of Maternal and Newborn care services	AMTSL application	3744/4129 (91%)	2843/2961 (96%)	2676/2890 (93%)
	PPH	24/4129 (1%)	20/2961 (1%)	29/2890 (1%)
	Newborn resuscitation	202/3496 (58%)	268/304 (88%)	254/277 (92%)
	Partograph use	707/3320 (21%)	1491/2549 (58%)	1137/1729 (66%)
	Syphilis testing for 1 st ANC mothers	605/5226 (12%)	1447/4515 (32%)	2520/3574 (71%)
	HB testing for 1 st ANC mothers	220/2860 (8%), 20 facilities	339/1666 (20%)	873/3574 (24.4%)
	Blood pressure measurement for ANC mothers	7322/11701 (63%)	7305/10239 (71%)	6895/8822 (78%)

GENDER INTEGRATION

ASSIST Uganda has integrated gender throughout its activities; data are disaggregated by sex and gender gaps are identified and addressed when relevant. All QI training materials, coaching materials, and learning sessions address gender, including at the national level, which contributes to

institutionalization. ASSIST supported training of 8 participants as trainers for the gender integration in health services course in collaboration with Communication for Healthy Communities.

- **DREAMS:** Onsite visit and training on gender integration and gender-based violence (GBV) prevention in the northern region. In Q3, ASSIST conducted an assessment visit to Gulu, designed a GBV prevention training module to be incorporated in the facilitator training manual based on the Stepping Stones package's approach to empower individuals to manage HIV, conducted a pilot training for facilitators in Gulu, and supported the roll-out of the training in three communities in Bardege sub-county in Gulu District. This resulted in designing an innovative approach to integrate gender in improvement activities towards reducing new HIV infections and unwanted pregnancy among adolescent girls and young women 10-24 years of age.
- **SMGL:** Gender was considered as a driving factor affecting antenatal care. Once integrated, antenatal visits increased by 80% in one community in Lira District.
- **COR (TB/HIV):** Appointment keeping among women and men was assessed over three weeks to identify solutions in response to findings. Gaps among women and men were closed with an overall appointment keeping reaching almost 90%.
- **PHFS:** Gender content was incorporated in the national QI training materials.

SUSTAINABILITY AND INSTITUTIONALIZATION

The USAID ASSIST Project ensures sustainability of programs and institutionalization through the following:

- District Health Team (DHT) trainings on quality improvement
- District and regional mentors training and involvement in coaching / mentorships at the sites
- Capacity building of health care workers: didactic trainings, on site mentorship / coaching
- Leadership and governance trainings
- Performance review meetings, involving the DHT and facilities
- Integrated health care delivery: QI initiatives were scaled up from disease-specific interventions to an integrated approach aimed at health systems strengthening.
- Peer training; health care workers with good knowledge and skills included in district-based trainings and inter facility mentorships
- Client involvement: Sensitization of clients about their roles and responsibilities to increase demand and feedback and ASSIST conducted a client satisfaction survey with feedback and follow-up regarding the reports they make. Clients have also been co-opted into the management systems at the facilities and district.
- Integration of the QI activities and budgets into the district and facility work plans
- Operation with the decentralized framework – involvement of the district leadership
- Accountability – documentation, tracking & sharing of progress. ASSIST held 2 quarterly review meetings in January 2016 and July 2016.
- Use of multidisciplinary teams for facility support during mentorship / coaching.
- District-led interventions to improve service delivery HIV care and treatment – 90-90-90 strategies
- Cost sharing of resources – stationery, office space, transport, and personnel

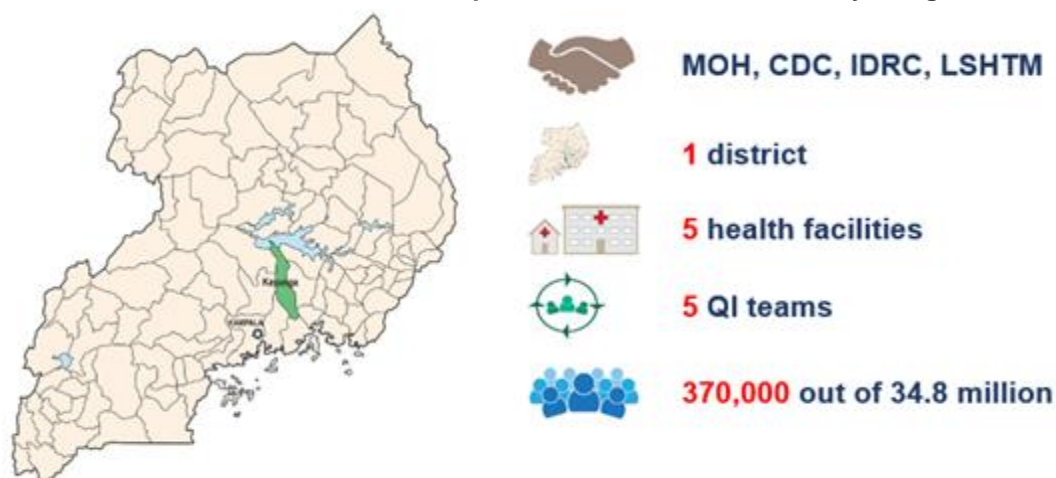
UGANDA IMPROVEMENT COLLABORATIVE STUDY—KAYUNGA DISTRICT

BACKGROUND

ASSIST, together with the MOH in Uganda, the U.S. Centers for Disease Control and Prevention (CDC), and Infectious Diseases Research Collaboration (IDRC), conducted a study to determine the effectiveness of using the improvement collaborative approach to improve the quality of health facility data to monitor trends of malaria (study entitled, "Improving the Quality of Health Facility Data to Monitor Trends in Malaria Burden: Effectiveness of the Improvement Collaborative Approach"). The objectives of this study were: 1) To estimate the effectiveness of an improvement collaborative to improve the quality of a routine malaria surveillance data; 2) to describe the inner processes of the improvement collaborative; and 3) to assess the cost of the improvement collaborative. Secondary to this work, case management of malaria (adherence to test and treatment guidelines) was expected to improve.

ASSIST and the MOH led the actual implementation while the CDC led the process of protocol development and provided onsite oversight in the field and data analysis. IDRC led the quantitative arm of the study to evaluate the IC approach. The London School of Hygiene and Tropical Medicine (LSHTM) led the qualitative team to describe and determine a thorough understanding of how the improvement collaborative worked.

Scale of USAID ASSIST’s Work on the Improvement Collaborative Study in Uganda



PROGRAM OVERVIEW

What are we trying to accomplish?	At what scale?
1. Improve the quality of services for malaria patients and suspects	
<ul style="list-style-type: none"> To improve malaria case management through increased adherence to “test and treat” guidelines To improve accuracy, timeliness and completeness of records and monthly reports To synchronize the health facility data sources 	<ul style="list-style-type: none"> 5 health facilities in Kayunga District, Uganda

Improvement Activity
 Cross-cutting Activity

Activity 1. Improve the quality of services for malaria patients and suspects

OVERVIEW

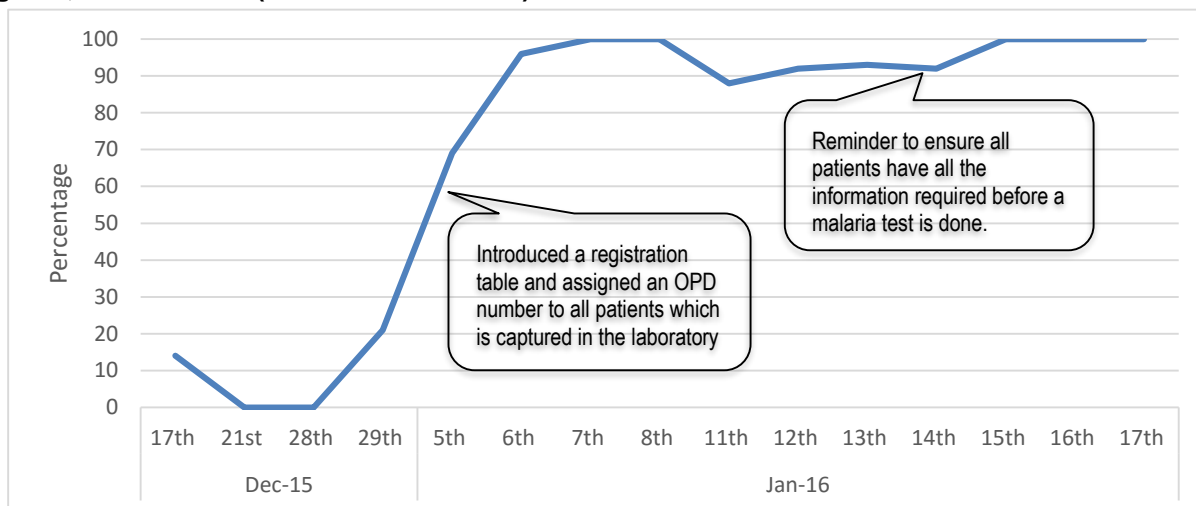
The study intervention was conducted at five sites in Uganda’s Kayunga District: Bbaale Health Center (HC) IV, Wabwoko HC III, Lugasa HC III, Kakiika HC II, and Nakyeso HC II from Nov 2015 to Aug 2016. Site teams developed improvement changes to test and ensure every malaria suspect and patient had primary data tools filled, data transferred to registers, and monthly reports. In particular, site teams focused on the following areas:

- Increase the proportion of malaria suspects and patients whose data in the primary tools, registers, and monthly reports are in agreement. Primary data entry tools of interest are from the outpatients, laboratory, and pharmacy. The specific data elements of focus were suspected malaria cases, reported malaria cases, malaria tests performed, and positive malaria tests.
- Increase the proportion of malaria suspects and patients whose data is complete in the medical records. This was a measure of the proportion of patients whose data is all filled out in the outpatient, laboratory, and pharmacy tools.
- Increase the proportion of malaria suspects and patients who can be cross referenced across the three facility registers (outpatient department, laboratory, and pharmacy)
- Increase the proportion of malaria suspects and patients managed as recommended by the test and treat guidelines.

KEY ACTIVITIES AND RESULTS

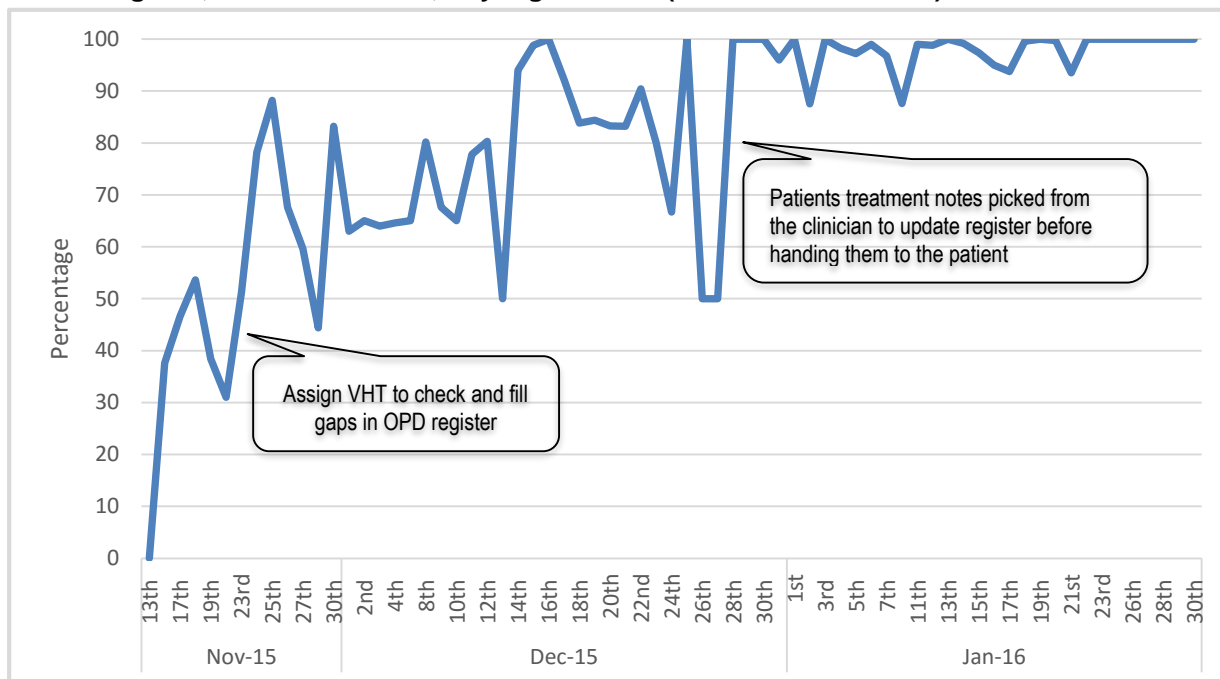
- **Conducted first learning session** (Nov 2015). The first learning session followed the stakeholders meeting on November 12, 2015 and involved site level participants. Its objectives were to: introduce quality improvement concepts to learning session participants, form quality improvement teams, develop site-specific improvement changes, and develop a way forward to start the improvement collaborative intervention. Participants agreed the quality of malaria records was poor and so all agreed to start with improving the level of completeness and accuracy of malaria records in the OPD register. Using QI methodology, each site was guided through site level challenges and root causes of poor quality records and to develop changes for improvement.
- **Conducted coaching visits** (Nov 2015 – Mar 2016). The first coaching visit (Nov 2015) was meant to support teams to implement action plans developed during the learning session while the Dec 2015 coaching was meant to review progress made at each site. During coaching, coaches supported the teams to update the documentation journal and where there were challenges with completeness of the records, they provided guidance to develop more changes for improvement. At two sites -- Wabwoko HC III and Bbaale HC IV -- the level of completeness and accuracy was low, which was attributed to some staff not filling the register to completion. The team at Wabwooko HC III decided to create a triage table and shift the OPD register from the pharmacy to the triage. They also assigned specific staff in charge of the triage to ensure the register is filled to completion. At Bbaale HC IV, the staff who knew how to fill out the register oriented those that still had difficulties in completing it. Coaching continued in the second quarter to support sites to sustain improved level of completeness of records and also for weak sites to learn from sites that showed improvements. Specifically, the coaching visit in Feb 2016 also focused at guiding sites to prepare for the learning session, while the visit in Mar 2016 was meant to support sites start improvements in adherence to the test and treat guidelines and data concordance.
- **Conducted second learning session** (Feb 2016). The purpose of the session was to share best practices in improving level of completeness of facility records across all the health facilities and document changes implemented by sites that had led to improvement and these included:
 - Assigning a specific health worker or village health team member to double check the registers for unfilled sections and update them
 - Introduction of a central registration table where all patients present their treatment notes for entry into the outpatient register before leaving the health facility
 - Patient treatment notes are picked from the clinician and entries made into the (registers-outpatient and pharmacy registers)
 - At Bbaale HC IV, improvement teams assigned a unique patient number at the registration table. This number is also registered in the laboratory and so has led to complete records in the laboratory (see **Figure 89**). Improvement in completeness of the lab register was due to changes introduced in the OPD such as introduction of a triage table so that OPD numbers are assigned to each patient making it possible for laboratory staff to record it in the laboratory register. This led to increase in the percentage of patients tested for malaria and recorded in the laboratory register who had complete malaria records from 0% in Dec 2015 to 100% in Jan 2016.

Figure 89. Uganda: Percentage of malaria patients with complete and accurate records in the lab register, Bbaale HC IV (Dec 2015 – Jan 2016)



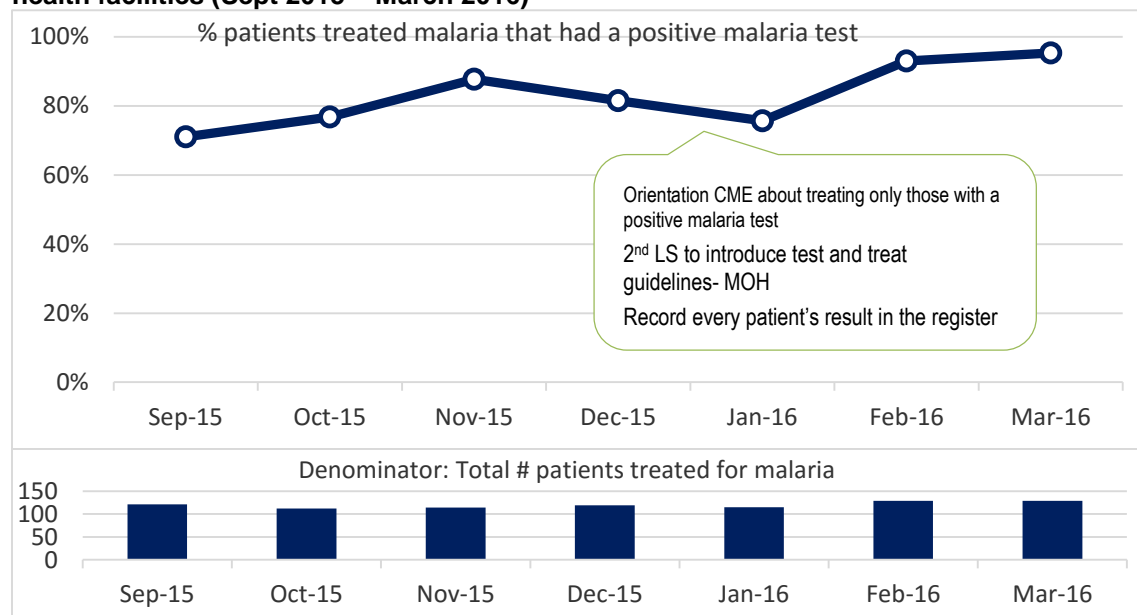
- Increased the percentage of patients whose records in the OPD register are complete** (Nov 2015 – Jan 2016). The level of completeness and accuracy of facility malaria records improved to 100% at all five health facilities (see **Figure 90**). The major change that led to the improvement was that teams assigned a supervisor to check for gaps in the OPD register and fill them. The same supervisor decided to check the dispensing log and fill missing gaps as well which improved the level of data quality of both registers at the same time. Coaching in December aimed at supporting teams at these sites to start checking for concordance of records between the OPD register and the pharmacy dispensing log. This was followed by on-site coaching by ASSIST and the National Malaria Control Program staff to support sites to identify reasons for incomplete records and develop solutions to address them. Lugasa, Nekyesa, and Kakiika health centers achieved 100% level of data completeness of the OPD register before the other two sites, at which improvement was not stable and so coaching focused on supporting those teams to implement changes for further improvement.

Figure 90. Uganda: Percentage of malaria patients with complete and accurate malaria records in the OPD register, 5 health facilities, Kayunga District (Nov 2015 – Jan 2016)



- **Improved malaria case management through adherence to the test and treat guidelines** (Sept 2015 – Mar 2016). In Feb 2016, facility teams met at the second learning session to develop plans to improve adherence to test and treat guidelines (**Figure 91**) in a bid to improve malaria case management. This followed a baseline assessment conducted prior to the learning session to identify improvement gaps and develop solutions to address such gaps. Changes developed include:
 - Conducting CMEs targeting all facility staff working in the OPD and laboratory department so they appreciate the need to adhere to test guidelines. Such CME also involve staff working on weekends.
 - Make testing kits (RDTs) available in OPD so that health workers can carry out a test even when the laboratory is closed.
 - Laboratory staff demonstrates to staff how to carry out a RDT for malaria before issuing tests kits.
 - Assign a health worker to double check the OPD register to ensure test results are correctly recorded. If wrong results are identified in the register, the health worker will correct them immediately or consult with the responsible staff.

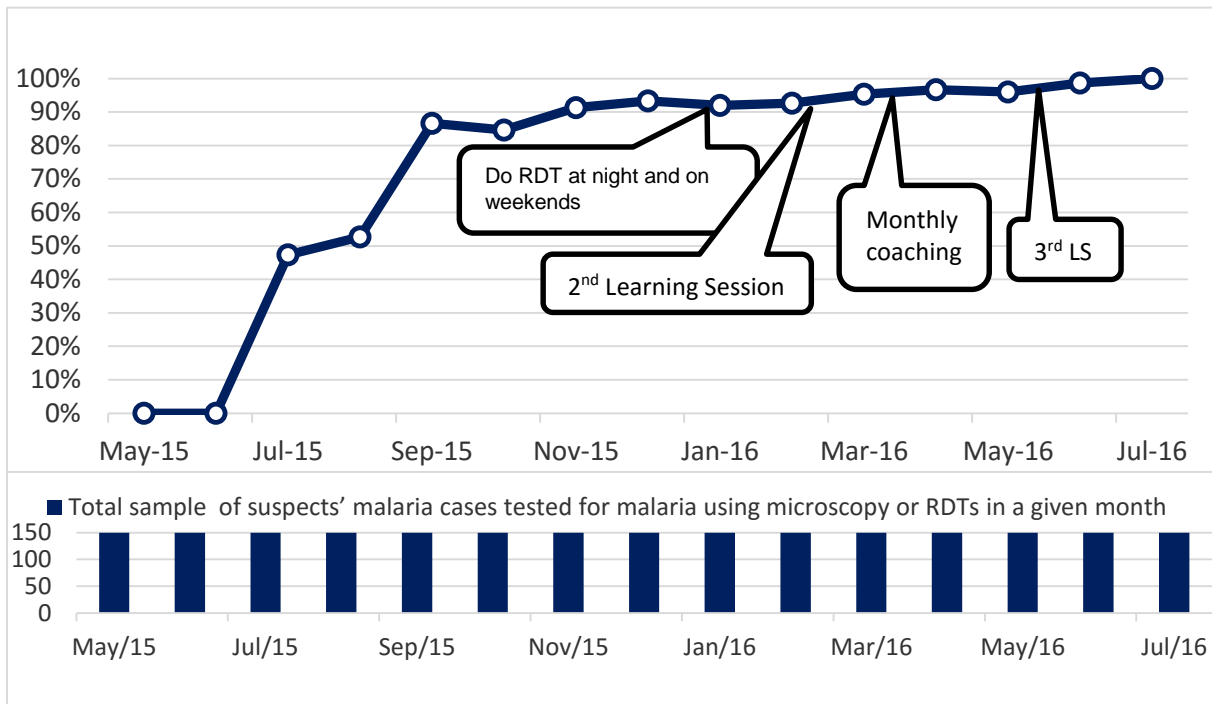
Figure 91. Uganda: Adherence to the test and treat guidelines for malaria case management, 5 health facilities (Sept 2015 – March 2016)



*Note: The district plans to secure funds to support and roll-out test and treat approach to other facilities in other health sub-districts.

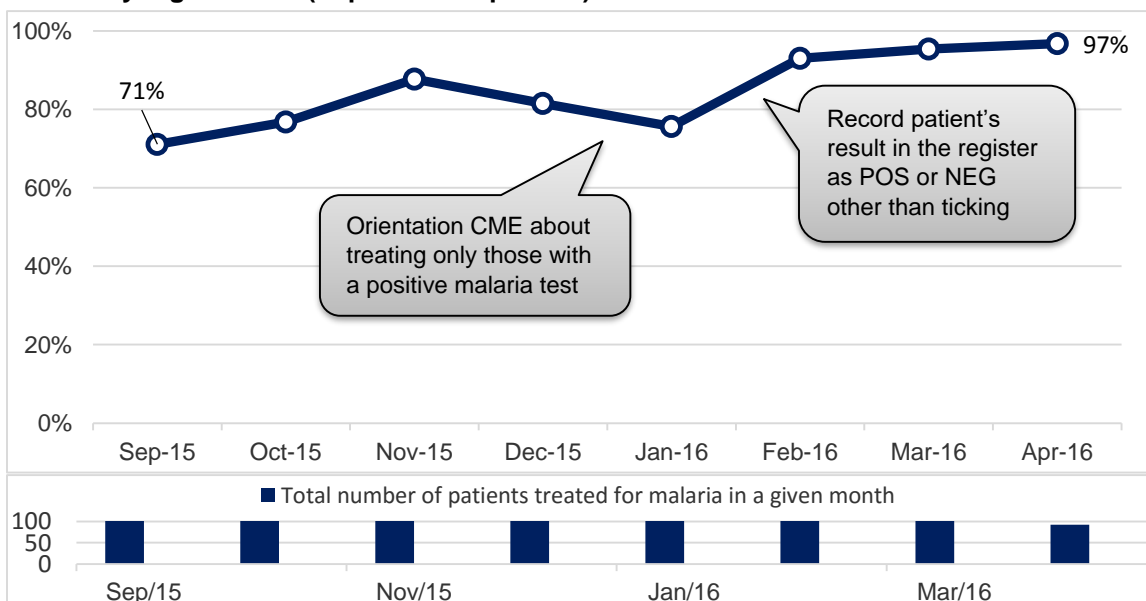
- **Developed improvement changes to ensure the OPD register and laboratory register are in agreement** (Mar 2016). These included:
 - Assign a VHT and health worker to take responsibility for collecting patients' treatment charts and laboratory results and hand them to the clinician after which they register them in the OPD register.
 - Stop ticking as a sign that a malaria test was done and instead write the actual result as either positive or negative. Count the number of malaria cases on a daily basis – at the end of each day so the monthly report is a sum of all daily entries.
 - Assign a second staff to recount numbers of malaria cases to confirm numbers reported by the records officer responsible for preparing the monthly report.
 - In the pharmacy- create a column for ACTs on each page of the dispensing log and number of ACTs given out and zero if there is a stock-out of ACTs.
- **Conducted two rounds of coaching** (Apr – May 2016).
- **Conducted the third learning session for the 5 sites and district level participants** (June 21 and 22, 2016).
- **Improved proportion of suspected malaria cases tested in the lab using microscopy or RDTs** (Nov 2015 – July 2016). Three health facilities – a health center IV and two HC IIIs – embarked on improving the care delivery processes in an effort to ensure all malaria suspects are tested (see **Figure 92**). They improved the proportion of malaria suspects tested in the lab by changing the flow of patients so all patients are sent to the lab before seeing the clinician and assigning a specific staff to collect patient treatment books containing malaria test request and deliver them to the laboratory. These led to 100% of malaria suspects being tested.

Figure 92. Uganda: Percentage of suspected malaria cases tested in the lab using microscopy or RDTs each month, 3 sites (Sept 2015 – July 2016)



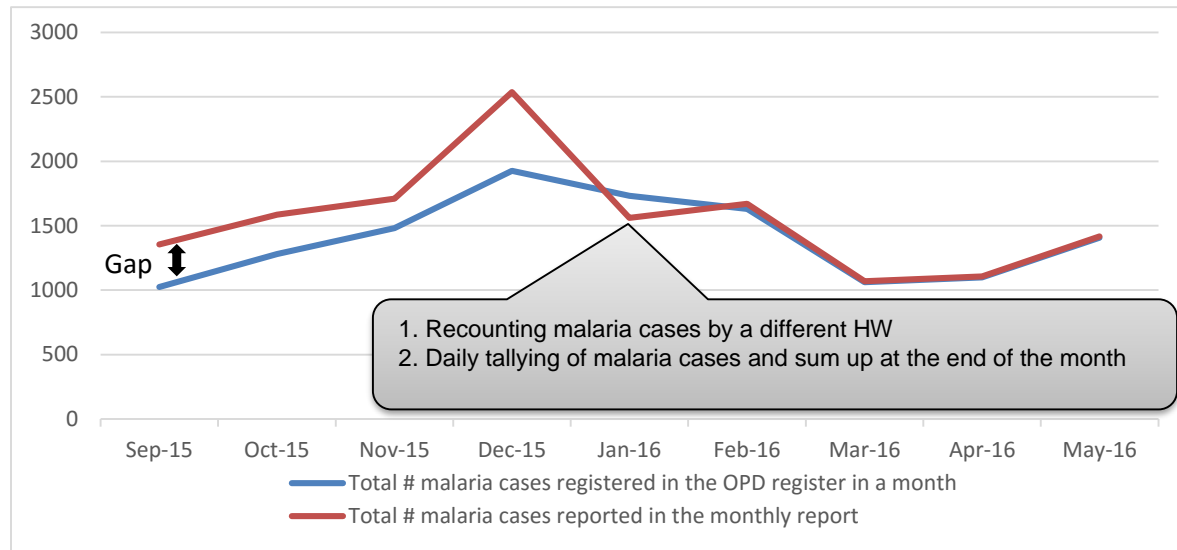
- Improved proportion of those treated for malaria who had a positive malaria test first** (Sept 2015 – Apr 2016). Five health facilities embarked on improving the care delivery processes in an effort to ensure all those treated for malaria first had a positive malaria test (see **Figure 93**). At one facility (HC IV), patient flow was altered so they pass through the laboratory, so that all suspected cases of malaria are tested and that no patient is treated for malaria before having a test. The facility also started doing malaria tests at night and weekends when the laboratory is closed by the staff working on the wards. OPD patients that turn up on weekends are tested by the staff working on inpatients. Testing kits were made available to wards.

Figure 93. Uganda: Percentage of patients treated for malaria that had a positive malaria test, five sites. Kayunga District (Sept 2015 – Apr 2016)



- Improving the concordance of malaria records between the OPD register and monthly report** (Apr – June 2016). **Figure 94** shows a narrowing difference between the number of malaria cases registered in the OPD register and those reported in the monthly report. Changes tested include teams counting the number of malaria cases appearing in the OPD register daily instead of at the end of the month.

Figure 94. Uganda: Concordance of malaria records between OPD register and the monthly report, five sites, Kayunga District (Sept 2015 – May 2016)



- Improved synchronized malaria test records between the laboratory and OPD register** (July 2015 – 2016) (**Figure 95**). This is attributed to changes including: assigning a VHT to collect patients' books from the laboratory and then record results before getting to the clinician, and daily cross checking of the laboratory and OPD register by a specific health worker. Similarly, **Figure 96** shows improved record synchronization at a single health facility.

Figure 95. Uganda: Percentage malaria suspects with tests results recorded in the lab that are also recorded in the OPD register, 3 health facilities (Sept 2015 – July 2016)

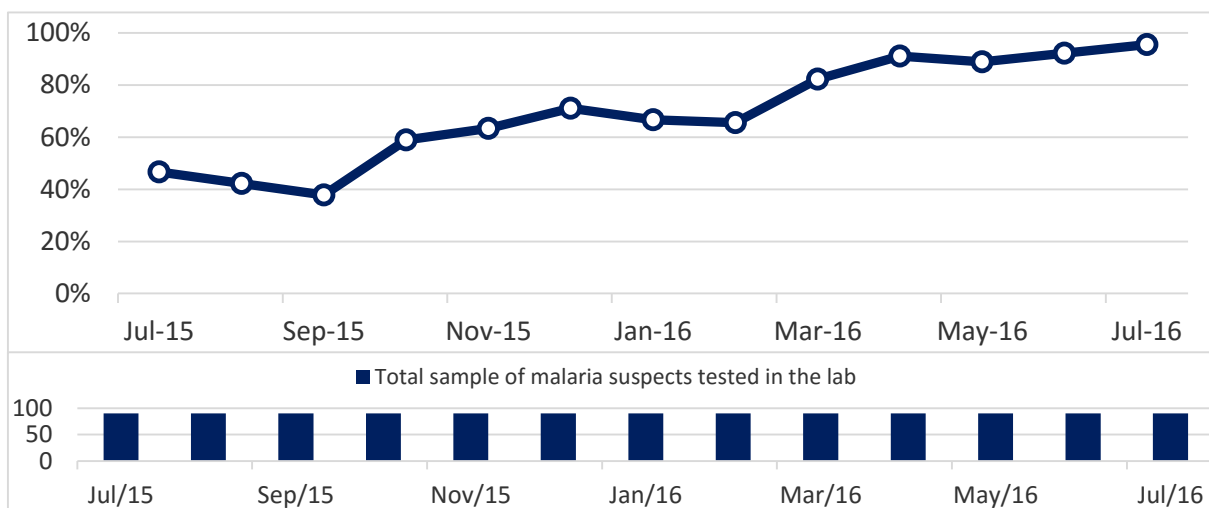
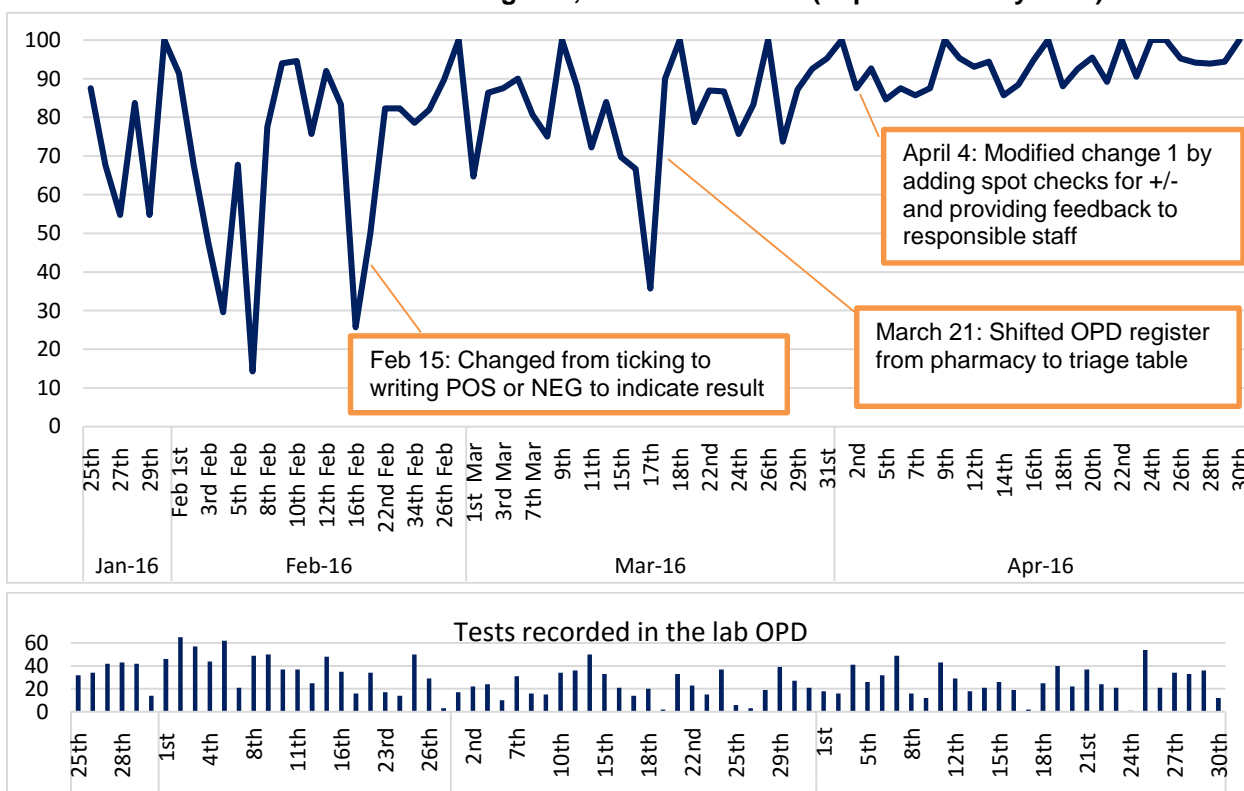


Figure 96. Uganda: Percent malaria patients with a positive test result recorded in the lab register that is also recorded in the OPD register, Wabwooko HC III (Sept 2015 – July 2016)



IMPROVEMENT IN KEY INDICATORS

Activity	Key indicators (5 sites; n=150)	Oct 2015	Nov 2015	Dec 2015	Jan 2016	Feb 2016	Mar 2016	Apr 2016	May 2016	Jun 2016	July 2016
Improve completeness and accuracy of malaria	% of patients with completely filled in details in the register in a given month	0*	48	65	68	98	100	100	100	100	100

Activity	Key indicators (5 sites; n=150)	Oct 2015	Nov 2015	Dec 2015	Jan 2016	Feb 2016	Mar 2016	Apr 2016	May 2016	Jun 2016	July 2016
records in OPD register											
		Baseline									
Improve malaria case management by adhering to test and treat guidelines	% of suspected malaria cases tested for malaria in the laboratory using microscopy or RDTs in a given month	81	91	93	92	93	95	97	96	99	100
	% of patients treated for malaria that had a positive malaria test in a given month	77	88	82	76	93	95	93	98	96	96
		Baseline									
Improve concordance of data between facility data tools	% of patients with malaria tests recorded in the lab that have their results recorded in the OPD register as well	59	63	71	67	64	82	91	89	88	93
	% of malaria patients with a positive test result recorded in the lab register that are also registered in the OPD register	74	64	75	81	76	90	90	89	90	95
	% of patients that were prescribed ACTs that were dispensed ACTs at the pharmacy	55	60	77	80	69	91	98	95	93	95
	% difference between number of malaria cases in OPD register and cases reported in the monthly report	--	15	32	10	18	1	1	1	2	1
	% difference between number of malaria tests in OPD register and tests reported in the monthly report	--	3	14	15	16	6	0.6	1	1.7	2
	% difference between number of positive malaria tests in OPD register and positive tests reported in the monthly report	--	1.0	0.2	0.6	7.0	0.3	0.8	0.1	1	2

*Retrospective Baseline

SUSTAINABILITY AND INSTITUTIONALIZATION

Joint site visits and learning sessions were conducted with the MOH National Malaria Control Team and district staff so they appreciated the focus of the intervention approaches and could incorporate them in their routine MOH and district activities. In particular, members of the district health management committee participated in the 3rd learning session to learn best practices and take the intervention beyond the study sites. District staff also participated in site visits for data collection as well as a harvest meeting. Development of a change package document is underway led by the ASSIST team which will be used for scale-up and institutionalizing best practices.

ASSIST shared site visit reports with the district health office and as a result, the district prioritized improving adherence to test and treat guidelines in two health sub districts, Bbaale and Kayunga. The district developed a proposal and is looking for funding to roll out adherence to test and treat intervention in parts of the district other than where the study was conducted. Joint activities provided an opportunity for the district and MOH to address site gaps in other areas of health care like HIV care, availability of medical equipment's including drug stocks.


ZAMBIA

BACKGROUND

Since FY14, the USAID ASSIST Project has been supporting the continued adoption, adaptation, and scale-up of nutrition assessment, counseling, and support (NACS) as a standard of care within the national HIV/AIDS program in Zambia. NACS supports improving the health and quality of life for people living with HIV (PLHIV), their families, and vulnerable children by improving nutritional status, reducing household food insecurity among families and children affected by HIV, and strengthening the integration of nutrition support with health systems at the clinic and community levels. ASSIST's work in Zambia is being conducted in collaboration with the Ministry of Health (MOH) and two other centrally funded projects in Zambia – Livelihoods and Food Security Technical Assistance II Project (LIFT II) and Food and Nutrition Technical Assistance III Project (FANTA III).

Scale of USAID ASSIST's Work in Zambia



 HIV/AIDS (including OVC)



MOH, 2 IPs
(FANTA and LIFT)



2 out of 104
districts



21 facilities



13 QI teams



84k out of 454k
served
by the 21
facilities

PROGRAM OVERVIEW

What are we trying to accomplish?	At what scale?
1. Improve nutritional status of HIV clients by tracking clients who are assessed for nutritional status and properly categorized, counseled, treated, and supported	
Improve management and nutritional status of malnourished HIV clients by: <ul style="list-style-type: none"> Integrating NACS into facility-based ART, PMTCT and MNCH services Strengthening community-facility linkages Strengthening the capacities of district health managers and care providers to apply improvement skills 	<ul style="list-style-type: none"> 21 selected facilities in Kitwe (16) and Mkushi (5) districts Spread to 21 remaining sites in Kitwe/Mkushi by Sept 2017 Catchment population: Approximately 84,000 HIV-infected persons out of 454,000 catchment population for the 21 sites

What are we trying to accomplish?	At what scale?
2. Apply improvement principles to implement an integrated, person-centered approach to HIV and nutrition care to improve engagement, retention, and wellness of PLHIV	
<ul style="list-style-type: none"> Increase engagement, adherence and retention of HIV patients in care 	<ul style="list-style-type: none"> 5 sites in Kitwe

Improvement Activity

Activity 1. Improve nutritional status of HIV clients by tracking clients who are assessed for nutritional status and properly categorized, counseled, treated, and supported

OVERVIEW

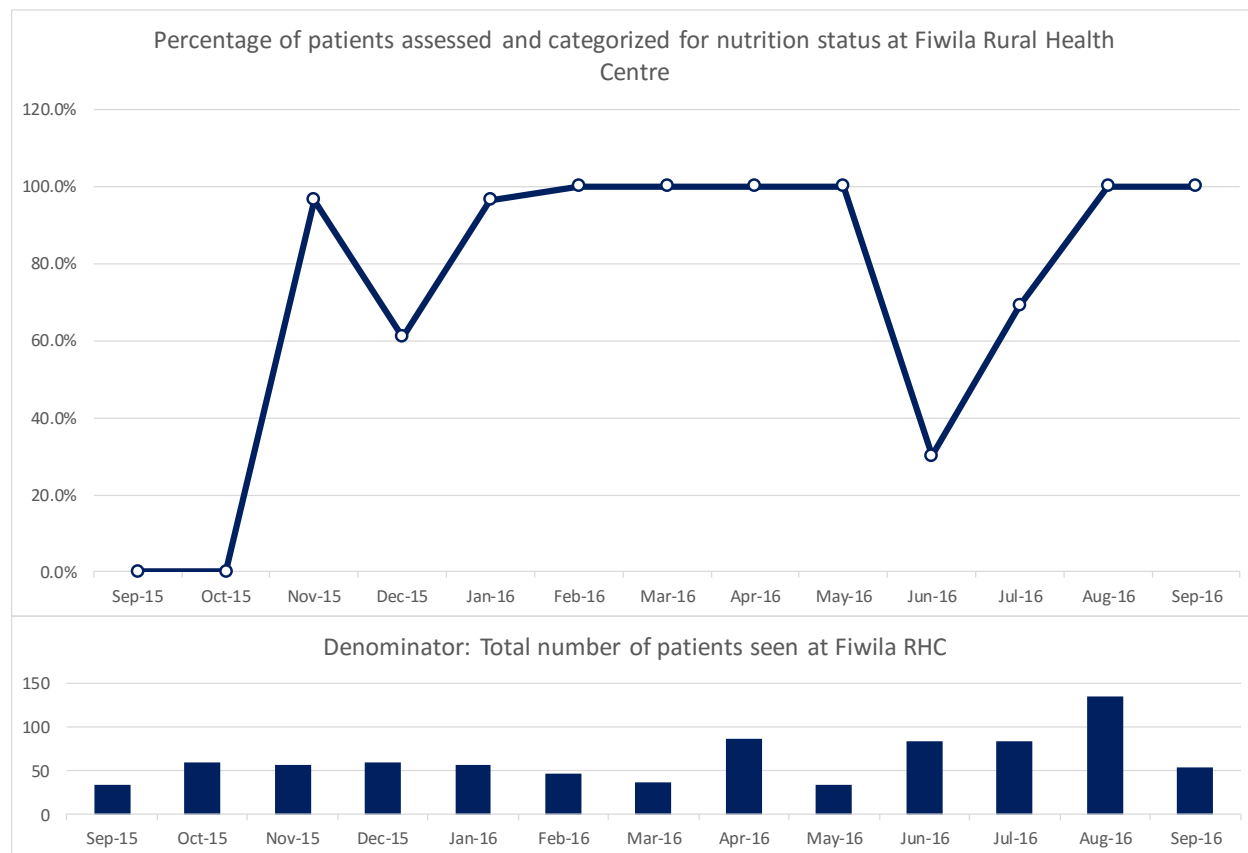
ASSIST supports NACS implementation and scale-up by applying quality improvement techniques to strengthen health systems that deliver nutrition services for PLHIV. Through support to facilities to integrate NACS services into HIV care, ASSIST aims to get all ART patients assessed and categorized for malnutrition and those needing them, referred to services that provide therapeutic or supplementary foods, with the ultimate goal of managing and reducing malnutrition among PLHIV. Using behavior change/self-management, ASSIST is working to increase engagement, adherence, and retention of HIV patients in care.

KEY ACCOMPLISHMENTS AND RESULTS

- **Provided support for coaching visits in 21 health facilities** (Oct 2015 – Sep 2016). To improve the assessment, categorization and follow up of malnourished PLHIV (severe acute malnutrition [SAM] and moderate acute malnutrition [MAM]), ASSIST provided coaching to ensure that the standard package of care for all PLHIV clients (which includes HIV care and support, nutrition assessment and categorization, and an appointment for the next visit) was being implemented at all 13 health facilities. In the fourth quarter (Jul-Sept 2016), this was scaled up to an additional 8 facilities in Kitwe, bringing the number of sites receiving QI support from ASSIST to 21 (16 sites in Kitwe and 5 in Mkushi)
- **Held first and second NACS learning sessions in Mkushi** (Nov 16-17, 2015 and Sept 6- 7, 2016). The first session was facilitated by Rachael Lungwebungu, QA/QI Advisor from the Ministry of Health, and Robert Musopole, Resident Advisor for ASSIST Zambia. The objectives were to review improvement plans on assessment and categorization of HIV clients, and to work with the sites to start up the improvement work in the five initial sites. The second session was held with the District and the five demonstration sites. The objective was to review what the sites have achieved so far, discuss challenges, and come up with plans on how they will foster their work and develop site specific action plans.
- **Held the second QI training for 15 sites (7 old sites, 8 new sites) in Kitwe** (May 16-20, 2016). The training was facilitated by MOH trainers from the provincial office. The team was headed by the clinical care specialist, Dr Lyapa Sikazwe. The objective was to improve competencies for quality improvement and enhance the quality of health care services delivered by the health care system in Kitwe District.
- **Held facility QI meetings in Mkushi** (June 28 – July 2, 2016). The meetings were facilitated by Lawrence Mwewa, QI Advisor, and Robert Musopole, Resident Advisor for ASSIST Zambia. The aim of the facility meetings was to review QI improvement plans, results for assessment and categorization for nutrition status, and strategies for how to mitigate the challenges in achieving the sites' goals.
- **Held facility start-up QI meetings in each of the 8 new sites in Kitwe** (July 20 – 29, 2016). The meetings were facilitated by Patricia Milandu for ASSIST Zambia. The aim of the facility meetings was to help facilities plan how they will implement the QI work and come up with an implementation plan.
- **Two QI Advisors (Patricia Milandu and Lawrence Mwewa from Zambia) attended the QI training in South Africa as part of their orientation process** (Aug15-17, 2016).

- **Conducted the research and evaluation (R&E) mandate exercise** (Sept 5- 30, 2016) with Sarah Lunsford, ASSIST’s Senior Advisor, Research & Evaluation team, Austin Tembo, Nutritionist, Kitwe and Lilian Ngoma, Nurse, Kamfinsa Clinic. Under NACS, the indicator on assessment and categorization was validated.
- **Result: Figure 97** shows an increase in the percentage of clients assessed and categorized for nutrition status and the decline in June due to the non-functionality of the scale in Fiwila Rural Health Center in Mkushi District. At this facility, the assessment is done by volunteers; lack of staff (currently the center has only one health care worker) and low literacy level among most volunteers, which makes them fail to utilize the nutrition register, are ongoing challenges.

Figure 97. Zambia: Percentage of clients assessed and categorized for their nutritional status, Fiwila Rural Health Center, Mkushi District (Sept 2015 – Jun 2016)



Activity 2. Apply improvement principles to implement an integrated, person-centered approach to HIV and nutrition care to improve engagement, retention, and wellness of PLHIV

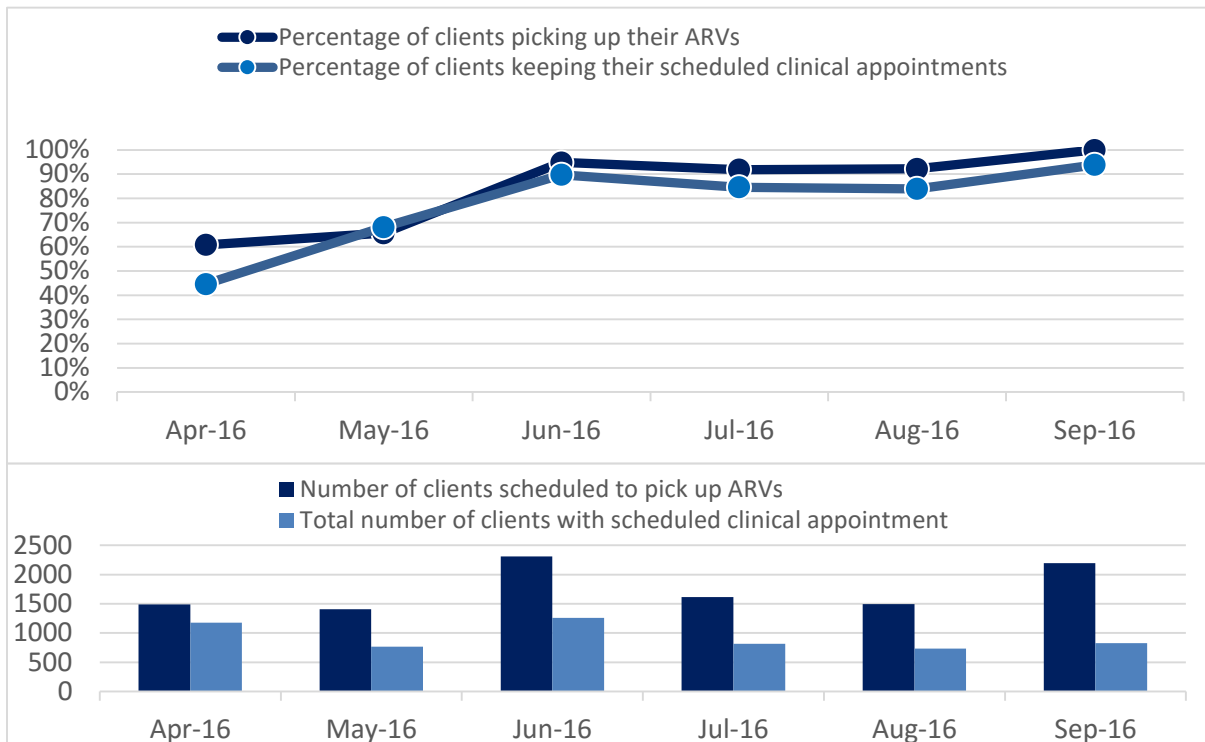
OVERVIEW

The objective of this work is to strengthen engagement, adherence to treatment, retention in care, and wellness of adult and pediatric malnourished HIV patients, determine which interventions work, and share implementation experiences and data among the countries to identify a common set of engagement, adherence, and retention (EAR) interventions that lead to desired outcomes, with the goal of eventual spread to other sites and regions within the countries. In Zambia, ASSIST is working in collaboration with two other centrally funded projects, the FANTA III Project and the LIFT II Project, along with bilateral clinical service and care partners.

KEY ACCOMPLISHMENTS AND RESULTS

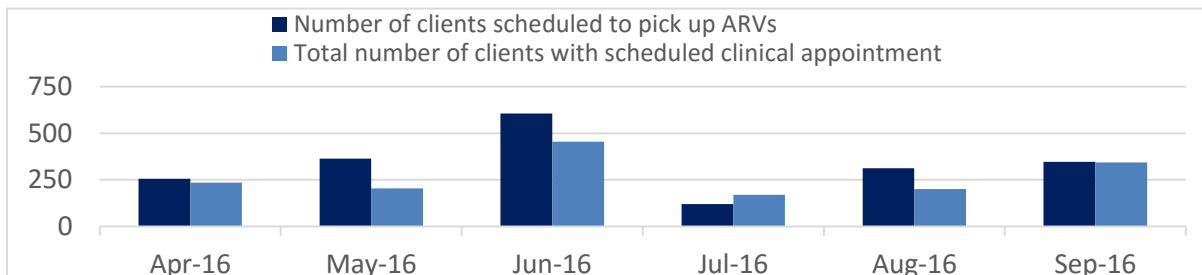
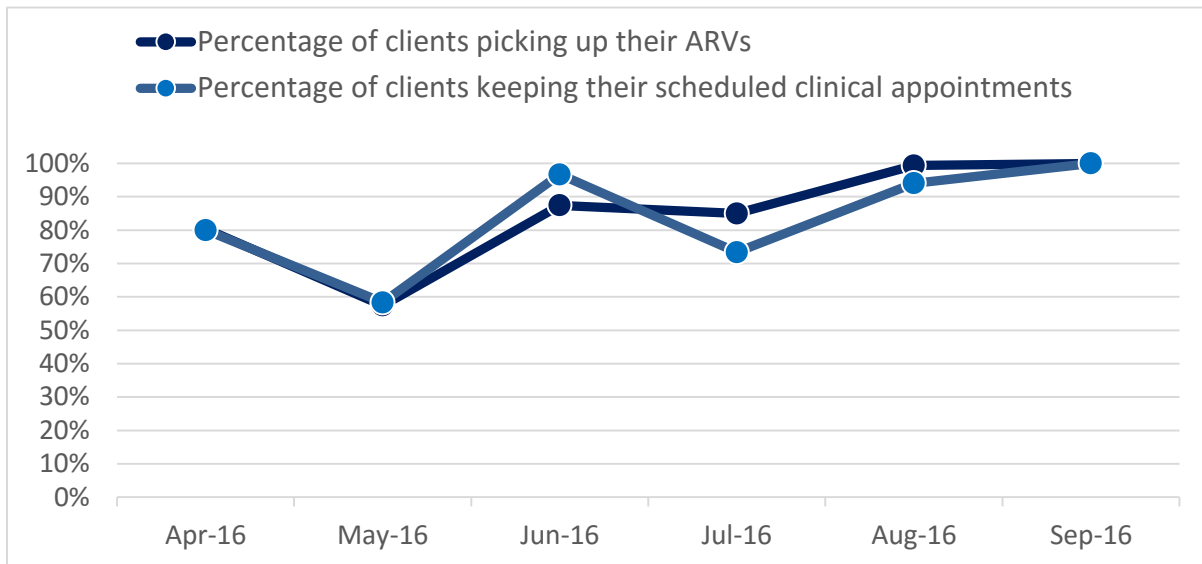
- **Held self-management support training in conjunction with FANTA** (Jan 18- 20, 2016). The training was facilitated by Dr. Diana Chamrad from ASSIST- HQ/Washington together with colleagues from FANTA-HQ/Washington, FANTA-Zambia, and the Kitwe District Office. It was attended by a NACS focal person from each of the five facilities where EAR is being conducted. Community volunteers were trained. The objectives were to help participants understand the multiple influences on key behaviors, promote a client-centered, action-focused approach to counseling that fosters client self-management, and develop interpersonal communication skills to improve the quality of individual counseling and group education.
- **Held the EAR orientation meeting with the Kitwe District Office and the five initial sites for this activity** (March 31, 2016). The objective of this meeting was to share EAR knowledge and plan on how the EAR activities will be implemented in the five initial sites.
- **Held a meeting with FANTA** (May 12, 2016). This meeting was attended by FANTA, ASSIST Uganda and ASSIST Zambia. Its aim was to come up with the collaborative document which clearly spells out the roles of FANTA and ASSIST in regards to the EAR.
- **Held the EAR learning session** (May 23- 24, 2016) with the District Office and the five initial sites. The objective of the learning session was to review the improvement plans and baseline data for the five sites, orient health care workers on self-management support approach to counselling, and develop site specific action plans.
- **Held facility EAR meeting at all the 5 EAR sites** (June 14- 17, 2016). The aim of the meeting was to work with the facility on how this activity will be implemented and explain its objective.
- **Held a meeting with the FANTA Kitwe office** (June 23, 2016). The aim of this meeting was to discuss tools of interest to be used in the EAR work which include the community- and facility-based tools.
- **Provided support for coaching visits in 5 health facilities** (July – Sept 2016). To improve the engagement, adherence and retention of clients in care. ASSIST continued to provide coaching to health facilities and assist them to come up with changes on how the system can identify clients with challenges and link them to self-management support counseling.
- **Participated in the regional EAR meeting** (Sept 20-21, 2016). This meeting was attended by staff from Uganda, Kenya, Tanzania, Zambia and headquarters. The meeting's objectives were to:
 - Review the outcomes we are driving towards and how we measure them
 - Share changes and results leading to improvement in engagement, adherence, and retention of people living with HIV
 - Share challenges experienced in improving EAR of PLHIV and identify strategies to address those challenges
 - Review the self-management process and data collection tools used by the four EAR countries
 - Plan next steps for documenting and spreading what we have learned.
- **Conducted the R&E mandate exercise** (Sept 5- 30, 2016) with Sarah Lunsford, ASSIST's Senior Advisor, Research & Evaluation team, Austin Tembo, Nutritionist, Kitwe, and Lilian Ngoma, Nurse, Kamfinsa Clinic. Under EAR work, the indicator on appointment-keeping was validated.
- **Tested changes to help identify HIV clients of interest and refer them for self-management support** (Q3). These include:
 - Introduced data collection tools – books/diaries
 - Introduced the self-management support (SMS) register
 - Chose EAR focal point persons at the facilities
 - Assigned clients of interest to health care workers/volunteers for SMS counselling
- **Results: Increase in HIV patients keeping clinical and ARVs pick up appointments at site level.** **Figure 98** shows that the percentage of HIV clients picking up their ARVs increased from 61% to 100% and the percentage with scheduled ARV clinic appointments increased from 45% to 94% from April to September 2016.

Figure 98. Zambia: Percentage of HIV clients keeping their clinical appointments at 5 sites, Kitwe District (April – Sept 2016)



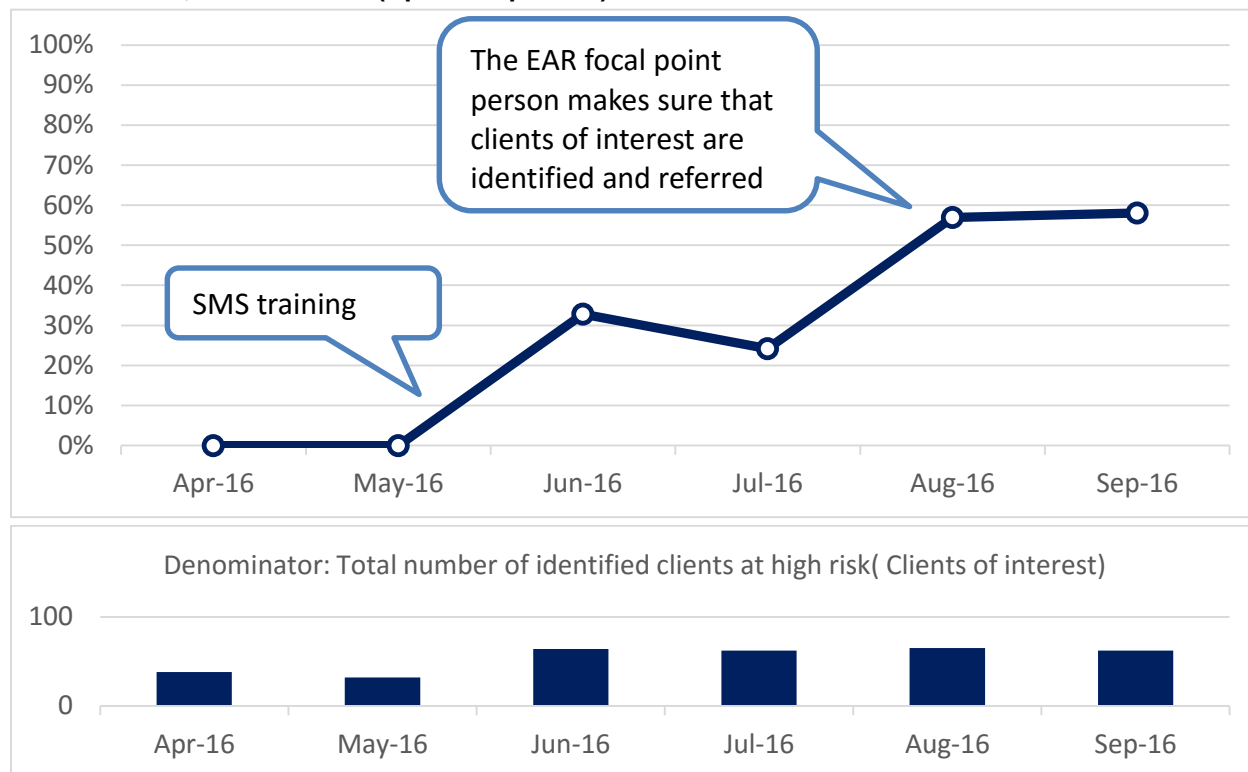
- Figure 99** shows that initially before the implementation of the EAR work, not all clients kept their appointments. On average in April 2016, 60% kept their ARV pick-up appointments (dark blue) and 45% kept their clinical appointments (light blue). Facilities did not have documentation to show booked clinical or ARV pick-up appointments before the implementation of this activity.

Figure 99. Zambia: Percentage of clients picking up their ARVs and keeping their scheduled clinical appointments, Mulenga clinic, Kitwe District (April – Sept 2016)



- **Figure 100** shows the percentage of all the identified clients with challenges that were enrolled in the self-management support (SMS). Initially before the implementation of the EAR work, facilities did not have a client identification system. After the self-management training, the facility came up with changes like designing tools for identifying of clients with challenges and choosing EAR focal points, who ensure that the identified clients are triaged for counselling.
- **Gender issues identified:** On average, the number of clients enrolled for SMS is increasing. For example, in April 2016, 0% were enrolled in the SMS as compared to 59% in Sept 2016. A greater percentage of female HIV clients (70%) were identified as having challenges and enrolled in the SMS as compared to men (43%) from April to September 2016.

Figure 100. Zambia: Percentage of clients enrolled in self- management support, Kawama Health Center, Kitwe District (April – Sept 2016)



IMPROVEMENT IN KEY INDICATORS

Activity	Indicator	Facility	Baseline (April 2016)	Sept 2016
Increase engagement, adherence and retention of HIV patients in care	Percentage of clients keeping their scheduled clinical appointments during reporting period	Mulenga	80% (188 out of 235)	100% (343 out of 343)
		Ipusukilo	68% (72 out of 106)	81% (62 out of 77)
		Kawama	42% (129 out of 307)	87% (84 out of 97)
		Kamfinsa	46% (29 out of 63)	100% (54 out of 54)
		Mindolo I	23% (108 out of 463)	91% (230 out of 253)
	Percentage of clients picking up their ARVs	Mulenga	80% (205 out of 255)	100% (246 out of 246)
		Ipusukilo	67% (80 out of 120)	100% (209 out of 209)
		Kawama	94% (439 out of 468)	100% (635 out of 635)
		Kamfinsa	50% (76 out of 162))	100% (186 out of 186)
		Mindolo I	21% (106 out of 486)	100% (819 out of 819)

GENDER INTEGRATION

ASSIST started collecting sex-disaggregated data for all the NACS indicators in Zambia in January 2016 and for the EAR indicators, from August 2016. We have not yet analyzed this data because there are challenges with the sex-disaggregated data, including how the sex-disaggregated denominators were arrived at. We will work with HQ and teams to determine if it is possible to analyze any of the sex-disaggregated data. Moving forward, we have planned to choose specific indicators to track as sex-disaggregated data. This will be done once HQ develops the list of the suggested sex-disaggregated indicators, and from this we shall choose which ones we can track and analyze for the EAR work. We plan to do the same with the NACS indicator because tracking all indicators is labor-intensive and needs more time to do this, especially on the part of the government workers.

SUSTAINABILITY AND INSTITUTIONALIZATION

ASSIST conducts its work in partnership with the MOH and partners. ASSIST played a key role in the development of the first national nutrition register. ASSIST is working with the MOH to enhance the reporting structure and the use of data from the reporting system.

ASIA

CAMBODIA

BACKGROUND

The USAID ASSIST Project in Cambodia began work in July 2014 at the request of USAID to provide technical assistance to strengthen the system of medical profession regulation. This requested activity scope was subsequently broadened in consultation with USAID Cambodia, the Ministry of Health (MoH), and key stakeholders to not only support the Medical Council of Cambodia (MCC) but also support the Dental Council (DCC), Midwives Council (CMC), Council of Nurses (CCN), and Pharmacy Council (PCC). By broadening the scope of this activity to holistically strengthen the regulatory system for all five health professions, the project seeks to address the issues of:

- Weak and variable effectiveness of health profession regulation in Cambodia;
- Limited authority, capacity, structure, and powers of the five health profession councils to regulate health professionals in Cambodia; and
- Limited connections between health profession regulation with other quality and safety mechanisms in the Cambodian health sector, both public and private.

In the beginning of the project, ASSIST worked with the MoH and five health profession councils to design a rapid baseline assessment on the status and performance of health profession regulation. The findings were used in a structured consultative process with all key stakeholders in October 2014 to identify strengths and weaknesses, and set strategic priorities for improvement. This resulted in the development of the Health Profession Councils' National Strategic Plan 2015-2020, which was officially launched on June 8, 2015.

The five-year strategic plan prioritizes the Councils' strategies and timeframes relating to aspects of four key regulatory functions: 1) Legislation, advocacy and responsiveness; 2) Organizational and internal governance; 3) External governance and public accountability; and 4) Responsibilities and functions. The strategies were prioritized over the five-year timeframe with Year 1 [FY15] and Year 2 [FY16] focusing on three key regulatory functions: legislative reform, organizational improvement, and registration.

The strategic plan informs the ASSIST activity design for each financial year. The ASSIST Project team provides technical advice as well as assistance and support for the coordination, implementation, and evaluation of the key strategies in partnership with the five Councils and the MoH.

During FY16, ASSIST continued to provide technical assistance and guidance to the councils and MoH:

- To finalize the draft law, help understand and defend the draft law on *Regulation of Health Practitioners* during its passage through the parliamentary approval process, and develop an agreed activity plan to implement the new Law on *Regulation of Health Practitioners*.
- To determine a three year shared Business Plan and Budget for the new Joint Secretariat planned for implementation in January 2017.
- To develop a web-based registration data base for the five Councils with a local Cambodian IT Developer
- To develop a comprehensive Communications Strategy to help raise awareness and understanding of health professional registration to health professionals, employers, education institutions and the public.

Scale of USAID ASSIST's Work in Cambodia



Five health profession Councils: Medical (Est. 2000); Dental (Est. 2005); Midwives (Est. 2006); Nurses (Est. 2007); Pharmacy (Est. 2010)

Three levels of Council: 1 National Council; 5 Regional Councils; 25 Provincial Councils



Population of Cambodia: **15,707,673**

Number and percentage of health professionals registered* by Council as of Sept. 30, 2016

*predominately public health sector

Council	Number of registered health professionals	Percentage of estimated total number
MCC	4,979	76%
DCC	952	82%
CMC	4600	84%
CCN	3,680	24%
PCC	2,336	96%
TOTAL	16,547	76%

Total estimated health professionals (public & private health care sectors): **30,918**

PROGRAM OVERVIEW

What are we trying to accomplish?	At what scale?
<p>1. Implement strategies for three of the health profession councils' priority strategic objectives in accordance with the <i>Health Profession Councils' National Strategic Plan 2015-2020</i></p>	
<p>*Strategic Goal #1: Legislative Review and Reform</p> <ul style="list-style-type: none"> • In consultation with key stakeholders: <ul style="list-style-type: none"> ○ Develop a new Law on <i>Regulation of Health Practitioners</i> for all Councils that meets the current and future needs of Cambodia ○ Develop consequential amendments at the appropriate level of the law: Royal Decrees, Sub Decrees and <i>Prakas</i> ○ Provide technical assistance during the passage of the new Law through the parliamentary process 	<p>All 5 health profession Councils at national, regional, and provincial levels</p>

What are we trying to accomplish?	At what scale?
<ul style="list-style-type: none"> Develop an implementation plan that guides the Councils and Ministry of Health for enactment of the new legislation at all levels- national, regional and provincial <p>*Strategic Goal #3: Organizational Re-design</p> <ul style="list-style-type: none"> Redesign the 5 Councils' existing governance and organizational structure to build capacity to establish and maintain effective and efficient business and regulatory systems and processes Implement governance arrangements and an organizational structure with robust financial accountability to deliver the five Councils' shared business and regulatory functions over a 3-year timeframe <p>*Strategic Goal #4: Registration</p> <ul style="list-style-type: none"> Achievement of full compliance with registration requirements and full awareness among stakeholders and health professionals of registration requirements and obligations by the end of FY16. 	

**Health Profession Councils National Strategic Plan 2016-2020 (June 8, 2016)*

Improvement Activity
 Cross-cutting Activity

Activity 1. Implement strategies for three of the health profession councils' priority strategic objectives in accordance with the *Health Profession Councils' National Strategic Plan 2015-2020*

OVERVIEW

ASSIST provides technical advice and assistance to the Councils and MoH to achieve the following activities:

Strategic Goals #1: Legislative Review and Reform

- Provide technical assistance during the passage of the new Law through the parliamentary process;
- Undertake a gap analysis and prepare consequential amendments at the appropriate level of the law: Royal Decrees, Sub Decrees and Prakas through a consultative process with key stakeholders;
- Develop an implementation plan to prepare the Councils for enactment of the new legislation.

Strategic Goal #3: Organizational Redesign

- Approval of a shared business plan to support the delivery of efficient and effective regulatory systems and processes for the five health profession councils;
- Establish the Councils' agreed business plan through a sustainable and accountable business model that can mobilize financial, human, and physical resources to deliver the regulatory systems and processes for the five health profession councils;
- Source and secure funds to support the implementation of the health profession councils' agreed business plan;
- Implement an agreed organizational structure with governance arrangements that includes a shared office and shared resources to efficiently and effectively deliver the business functions and, where agreed, regulatory functions for all five health professions.

Strategic Goal #4: Registration

- Achieve full compliance with registration requirements and full awareness among stakeholders and health professionals of registration requirements and obligations by the end of FY16 in preparation for the introduction of mandatory registration and licensure to practice as per the new legislation;
- Develop an implementation plan for a registration trial across a large, medium, and small province which includes shared policy and procedures, standardized forms, a communications plan, and monitoring and evaluation of the outcomes;

- Implement training activities by the Councils for Council staff and members and key stakeholders on the new registration processes;
- Develop and implement an electronic public register for all five Councils that is accessible to all stakeholders, by end of FY16.

GENERAL: TECHNICAL ASSISTANCE, WORKSHOPS, AND CONFERENCES

- **Contributed to the development of the Ministry of Health’s new Health Workforce Development Plan (HDWP) 2016-2020** “*Managing a competent health workforce for improved service delivery,*” (Mar 2015 – Mar 2016). This plan was officially launched at the RGC’s 37th National Health Congress (Mar 2016) and includes a strategic focus on *strengthening health workforce regulation and management to ensure quality of service delivery* through strengthening health professional regulation. The HDWP 2016-2020 is an important sub-plan of the RGC’s Health Strategic Plan 3 2016-2020 (HSP3).
- **Facilitated a one-day visit to Cambodia by Niall Dickson, Chair of the International Medical Regulatory Authorities Association (IAMRA) and CEO of General Medical Council, UK** (May 2016).
- **USAID Cambodia approved the Monitoring and Evaluation Plan for the ASSIST Project – Cambodia** (Aug 2016).
- **Participated in Council workshops:**
 - **Cambodian Midwives Council’s dissemination workshop on registration and re-registration** (Sept 2016) focusing on Continuing Professional Development (CPD) to private midwives and midwives’ employers (private hospitals, maternal clinics, and antenatal care room located in Phnom Penh).
 - **Cambodian Council of Nurses** with Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH and Ministry of Commerce in Cambodia **to implement the regional project “Support to the Initiative for ASEAN Integration (IAI) within the framework of the ASEAN Single Market”** (Sept 2016). The focus was to introduce the project work plan and cooperation framework on mobility of skilled labor as per the ASEAN Mutual Recognition Arrangement for Nursing Services (MRA-NS); presentation of the initial findings of the consultant; and discussion of Cambodia’s priorities, responsibilities, and needs for coordination.
- **Attendance by three representatives of the Medical, Dental, and Pharmacy Councils of Cambodia with ASSIST Resident Adviser to the IAMRA2016 Biannual International Conference in Melbourne, Victoria, Australia and a site visit to the Australian Health Practitioner Regulation Agency (AHPRA), the secretariat to 14 National health Profession Boards** (Sept 2016).

KEY ACCOMPLISHMENTS AND RESULTS

Strategic Goal #1: Legislative Review and Reform

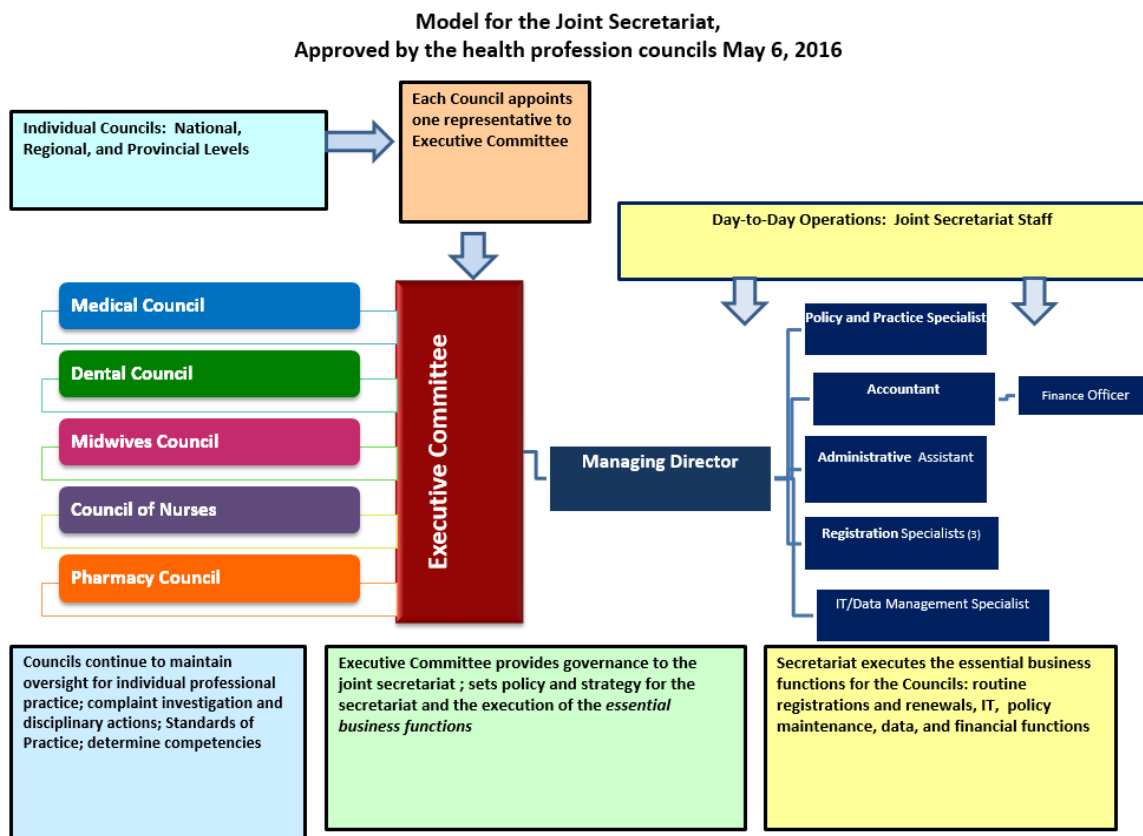
- **Provided technical advice and guidance to the Councils:**
 - resulting in amendments to the draft Law on Regulation of Health Practitioners particularly relating to two Articles on “Fitness to Practice” and “Transitional Provisions” (Oct 2015).
 - to defend the draft law during its passage through parliamentary process. This included the legal approach to (1) the reporting of complaints first to the Council regarding a health practitioner’s health, professional performance, and/or conduct; and (2) each Council’s role in investigation and making judgments with possible sanctions or protective actions on the practice of the health practitioner (Mar 2016)
- **Draft law on Regulation of Health Practitioners finalized** for passage through the Parliamentary approval process. (June 2016)
- **Draft law on Regulation of Health Practitioners reviewed by the Expert Committee # 2 of the Parliament with minor editorial amendments that did not alter the intent of the proposed new law** (Aug 2016) Draft law scheduled for presentation to the National Assembly on October 7, 2016

- Developed the **Activity Plan for Implementation of the new Law on Regulation of Health Practitioners** with approval from the health profession Councils and agreement from MoH (June and Aug 2016).
- **Negotiated with a local legal firm to undertake specific legal activities in the Activity Plan**, the first of which is a desktop review of Royal Decrees, Sub-decrees, and Prakas for the five Councils to identify new additions and amendments required to align these legal documents to the proposed new law (Sep 2016).

Strategic Goal #3: Organizational Redesign

- **On-site visit by Anne Rooney, consultant with ASSIST partner EnCompass LLC** (Oct 2015) to (1) present the first draft of the proposed business plan to the five Councils and obtained their feedback and agreement on the preferred model for the joint secretariat; (2) view office accommodation and follow up on additional information from stakeholders; and (3) present the work on the business plan to USAID Cambodia.
- **The proposed Business Plan including the model for the Joint Secretariat was considered by Councils following two meetings** (Feb & March 2016) with the organizational model of the Joint Secretariat being approved by all five health profession councils on May 6, 2016 (see Figure 101).

Figure 101. Cambodia: Model for the Joint Secretariat



- **The associated budget modelling for the Business Plan** required follow up with each individual Council to increase their understanding and help each Council to make an informed decision with regards the percentage allocation of funds that each Council will contribute to the Joint Secretariat.
- **Budget estimates for 2017-2019 for each Council's projected revenue, the percent allocation of funds from each Council, and the funds required to establish and maintain a Joint Secretariat were finalized** (June 2016)

- **All councils agreed** (July 2016):
 - **To the percent allocation of National Council's revenue** based on each Council's estimated revenue to support the establishment and management of the Joint Secretariat and a shared office by January 2017
 - **That the percentage allocation should be reviewed annually** with the expectation that the Councils will increasingly contribute funds from their total budget until they are self-funding or reliant on a relatively small Royal Government of Cambodia grant to meet any budget shortfall
 - **That the percentage allocation of funds by council will be reviewed annually** to determine the increase each year and assess how best to move from Percentage Allocation of funds from National Council revenue to Percentage Allocation of funds from total Council revenue (National, Regional and Provincial) to thereby achieve a self-funded business model
- **Prepared presentation for USAID Cambodia to inform and engage health partners in the establishment of Joint Secretariat and need for human, physical, and financial resources and continued support for the health profession councils** (May 2016).
- **Drafted position descriptions for the seven key positions within the Councils' Joint Secretariat**, for review and approval by the Councils (Sept 2016)
- **Sourced the Ministry of Health's new documentation for a 3-year budget strategy and annual budget submission** in accordance with the National Health Strategic Plan 3 (2016 - 2020) to enable EnCompass LLC. consultant, Anne Rooney to prepare a budget submission for the Councils to formally present, and defend their request for funds from the Royal Government of Cambodia to establish the Joint Secretariat (Sept 2016)

Strategic Goal #4: Registration

- **ASSIST Team with USAID Cambodia using prepared questions to interview Directors of Provincial Health Departments; representatives from each Provincial Council; health professionals from public and private sectors in Siem Reap & Oddor Meanchey Province** (Jan 2016). All Councils considered those findings that demonstrated the need for further improvement by the majority or all Councils and agreed to the:
 - Development of a single registration process that delivers the most efficient and effective approach for registration;
 - Development of a shared registration policy, procedures and forms for approval and implementation of a harmonized registration process by Councils; and
 - Implementation of new registration system and processes across all 25 provinces.
- **Analyzed registration data and reported to the USAID Mission (Q1-Q4). Figure 102** shows the total number of registrations from 2014-2016. In 2016 there was a slight decrease in the numbers registered for CMC and a significant decrease for CCN. Further analysis is being undertaken in Quarter 1, FY2017 to better understand the reasons for this substantial decrease in CCN registration data. **Figure 103** shows sex-disaggregated registration data for 2014 - 2016.

Figure 102. Cambodia: Comparison of five Councils' registered health professionals for 2014 - 2016

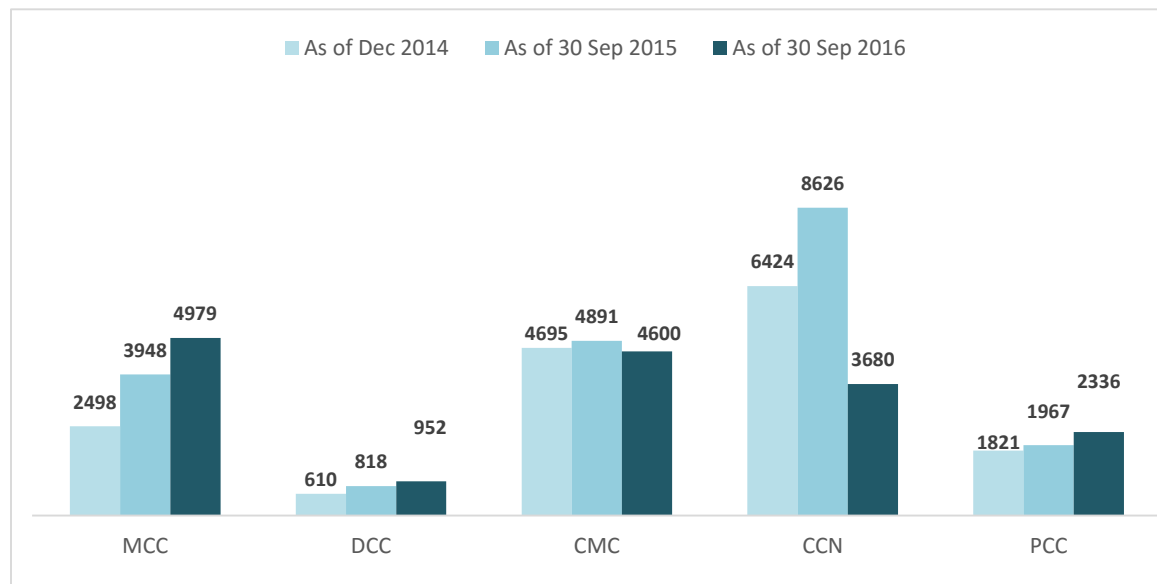
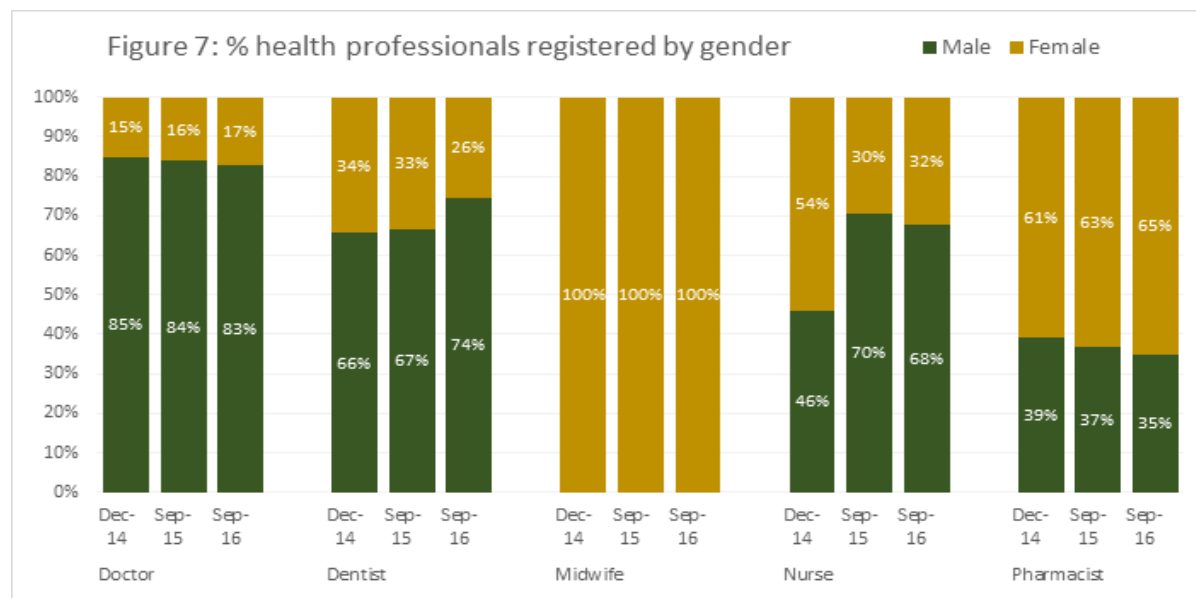


Figure 103. Cambodia: Sex-disaggregated registrations by Council, FY2014 – FY2016



- **Visit to Siem Reap and Oddor Meanchey Provinces** (Jan 2016) with USAID Cambodia representative for five days, to interview representatives from the five Provincial Councils and other health professionals to gather information to better understand the local challenges and opportunities for improvement in the registration process and gain insight into health professionals' awareness of the requirement for registration to practice their profession.
- **Supported the USAID Cambodia Data Quality Assessment team to review the quality of the registration data for all five Councils in three provinces:** Battambang (large province, May 2016); Prey Veng (medium sized province, June 2016); Koh Kong (small province, March 2016). ASSIST coordinated the reviews and observed the assessments at the request of USAID Cambodia.

- **Facilitated USAID Cambodia presenting to the Councils on the outcomes of USAID Cambodia’s Data Quality Assessment Team’s review of registration of health professionals in three provinces** (Aug 2016).
- **Developed Scope of Work and recruited Social Behavior Change Communication (SBCC) Consultant to work with ASSIST, the National Centre of Health Promotion (NCHP), the Ministry of Health, and five health profession Councils** (June 2016). The purpose of the SBCC strategy and communication interventions is to raise awareness and understanding of:
 - Health professionals and stakeholders (e.g., Councils, employers, higher education institutions) on the importance of all health professionals being registered with their respective Council (Medical, Dental, Midwifery, Nursing, Pharmacy); and
 - The public (e.g. clients and service users, patient groups) about the importance of being treated by a registered health professional.
- **Presented to Councils the summary of findings regarding the current registration system, processes, and barriers** (July 2016), from ASSIST team interviews of representative/s from each National Council using prepared questions.
- **Developed a scope of work and negotiated with a local IT developer for the development of a web-based registration data base for all five councils** (Aug 2016)
- **Conducted key informant interview surveys** (Aug 2016) with a small number of registered and non-registered health professionals and health profession Council Members from all five Councils in four provinces: Phnom Penh City (large province), Battambang (large province), Prey Veng (medium province) and Oddor Meanchey (small province). Development of survey instruments and sampling methodology was completed prior to data collection. This research will help to:
 - gain a better understanding on the general knowledge of public and private health professionals on the existing legislative requirements for mandatory registration and payment of the annual renewal fee
 - identify factors that influence health professionals to register/not to register
 - determine the most effective communication channels used by health professionals to access information/ Messages to use regarding the importance of registration and yearly payment of fee to retain registration
- **Developed technical report “Cambodia: Key Informant Interviews Among Health Professionals and Health Profession Council Members Regarding Health Professional Registration”** (Sept 2016). These findings will inform the current development of a Social Behavior Change Communications (SBCC) strategy.

IMPROVEMENT IN KEY INDICATORS

Activity	Indicators	Baseline	2015	Most Recent *	
Implement strategies for three of the health profession Councils’ priority strategic objectives	Health Professions’ Regulatory System Performance Scorecard (out of 40)	15/40 (Oct 2014)	---	---	
		<i>Dec 2014</i>	<i>Sep 2015</i>	<i>Sep 2016</i>	
	% of health professionals registered with each health profession council (from estimated total # of health professionals)	Doctors	41.6	65.8	76.0
		Dentists	Unknown	74.4	82.0
		Midwives	86.8	91.4	84.0
		Nurses	43.0	57.2	24.0
	Pharmacists	86.4	93.4	96.0	

*Further analysis is being undertaken in Quarter 1, FY2017

GENDER INTEGRATION

Annual registration data for each of the five health profession councils are collected and presented by sex.

SUSTAINABILITY AND INSTITUTIONALIZATION

The agreement by all five health profession councils along with their ongoing commitment for the shared National Strategic Plan 2015-2020 provides an important mechanism by which the transformational change for strengthening the system of health profession regulation can occur in Cambodia.

The new draft law on *Regulation of Health Practitioners* is an extremely important mechanism to strengthen the system of health profession regulation. It addresses some of the identified gaps and omissions in the existing law, particularly relating to health professional registration and a renewable license to practice for all health practitioners with associated penalties for not holding registration and/or a license to practice; professional standards and scopes of practice; and investigation of complaints relating to health, performance and professional conduct of health professionals. There is also the power for Councils to take protective action on health matters or apply sanctions on performance and conduct matters of the health practitioner. It will give the legal authority and power to the Councils to set the requirements for, and:

- Ensure 100% registration of all health professionals in Cambodia, by issuing licenses to practice to those registered health professionals who wish to practice their profession and requiring regular renewal of that license;
- Determine scope/s of practice for each health profession; and
- Apply penalties to health professionals who do not register with their Council and who practice without a current license to practice.

Each Council's ability to enforce the requirements of initial registration and a renewable license to practice in accordance with the law will ensure health professionals are initially registered and then continuing to demonstrate their competence and fitness to practice through a renewable license to practice. Competence and fitness to practice will be evaluated through evidence such as continuing professional development, how recently they have practiced their profession, a check of their criminal history, and that there is no physical or mental impairment that may adversely affect their ability to practice.

The development of a shared Business Plan for the five health profession Councils provides the framework by which the Councils can maintain professional independence and share human and physical resources to develop robust and transparent systems and processes to efficiently and effectively deliver both the business and the regulatory functions of registration and in the future, licensure; professional practice codes and standards that establish the expected standard of professional practice; investigation and management of complaints in relation to the health, performance, and conduct of health professionals; compliance of health professionals in registration and continuing competence to practice.

One hundred percent registration of eligible applicants combined with a regular renewal process for a license to practice by all registered health professionals will provide the sustainable revenue by which the Councils can employ staff to deliver the regulatory functions and lease office premises. This will diminish the reliance on volunteer Council members to execute the business, administrative, and regulatory functions and over time, build a sustainable shared office with staff for the five Councils.

INDIA

BACKGROUND

USAID ASSIST started working in India in August 2013 in the six USAID-supported states to build improvement capability by enhancing the commitment and capability of leaders and health care workers to implement health care improvement along the continuum of reproductive, maternal, neonatal, child, and adolescent health (RMNCH+A). By the end of December 2015, the project was working with 415 facilities and 437 quality improvement teams in the country. At that point, ASSIST handed over these facilities to IPE Global, another USAID-funded partner, and since February 2016, ASSIST has been focusing on building relationships with domestic institutions that we can support to become leaders in implementing and spreading QI approaches. Our current focus is to build the skills of interested stakeholders to support the spread of improvement methods, by:

- Building the skills of individuals to become leaders in using QI methods
- Building capacity of institutions which are invested in using and promoting QI
- Building the skills of individuals and institutions to support other stakeholders in India to learn and apply QI

Scale of USAID ASSIST's Work in India



Ministry of Health and Family Welfare (MOHFW), IAP, AIIMS




60 facilities



71 QI teams

PROGRAM OVERVIEW

What are we trying to accomplish?	At what scale?
1. Enhance improvement capability in the Indian health system through conducting improvements in the “RMNCH+A” continuum in public and private entities	
A. Improve care along the RMNCH+A continuum in priority USAID districts	
<ul style="list-style-type: none"> • Develop the capacity to conduct improvement among health care workers at community, facility, district, state and national levels • Enhance commitment and capability of leaders at the community, facility, district, state and national levels to lead health care improvement 	Until December 2015 we worked in 6 USAID-supported states, all 27 of the USAID-supported districts, and one “block” in each of the selected districts: <ul style="list-style-type: none"> • Delhi: 2 districts, 2 blocks • Himachal Pradesh (HP): 4 districts, 6 blocks • Punjab: 5 districts, 5 blocks • Uttarakhand: 3 districts, 3 blocks • Jharkhand: 6 districts, 10 blocks • Haryana: 7 districts, 7 blocks • Total number of facilities: 437
B. Build skills of interested stakeholders to support the spread of improvement methods	
<ul style="list-style-type: none"> • Build the skills of individuals to become leaders in using QI methods • Build capacity of institutions which are invested in using and promoting QI • Build the skills of individuals and institutions to support other stakeholders in India to learn and apply QI 	Current partners include: <ul style="list-style-type: none"> • All India Institute of Medical Sciences • Indian Academy of Pediatrics • Lady Hardinge Medical College • State of Himachal Pradesh • State of Meghalaya • Sitaram Bhartia Institute of Science and Research

 Cross-cutting Activity

Activity 1a. Improve care along the RMNCH+A continuum in priority USAID districts

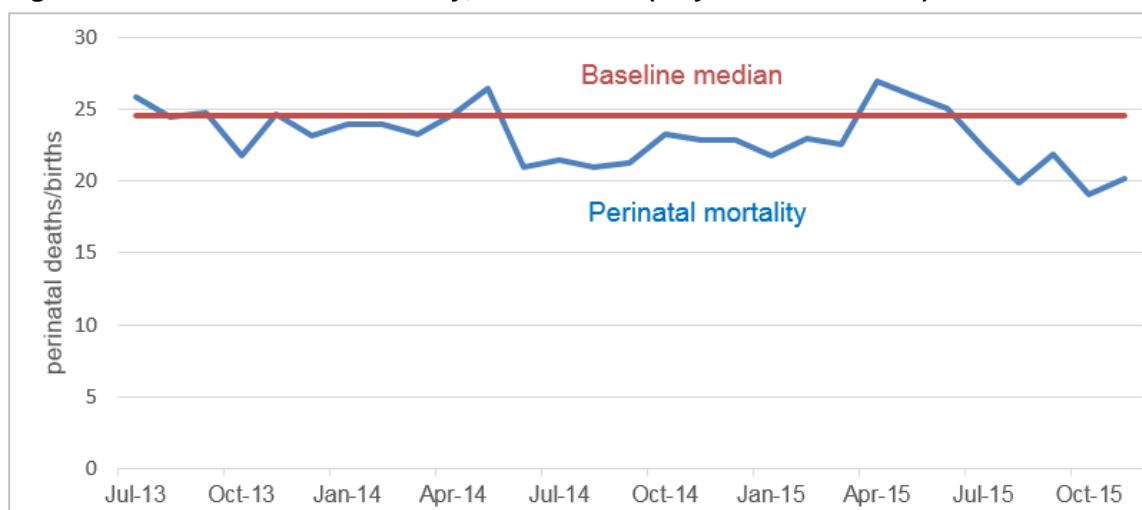
OVERVIEW

Approximately 800,000 babies per year die in their first month of life in India. This is more than 50% of all child deaths. Three hundred thousand (300,000) of these deaths are in the first 24 hours. Progress on neonatal survival and particularly early neonatal survival has been slower than progress in other age groups. ASSIST is working across the RMNCH+A continuum but is paying particular focus on the intrapartum and early neonatal period since this is the most efficient strategy to save lives.

KEY ACCOMPLISHMENTS AND RESULTS

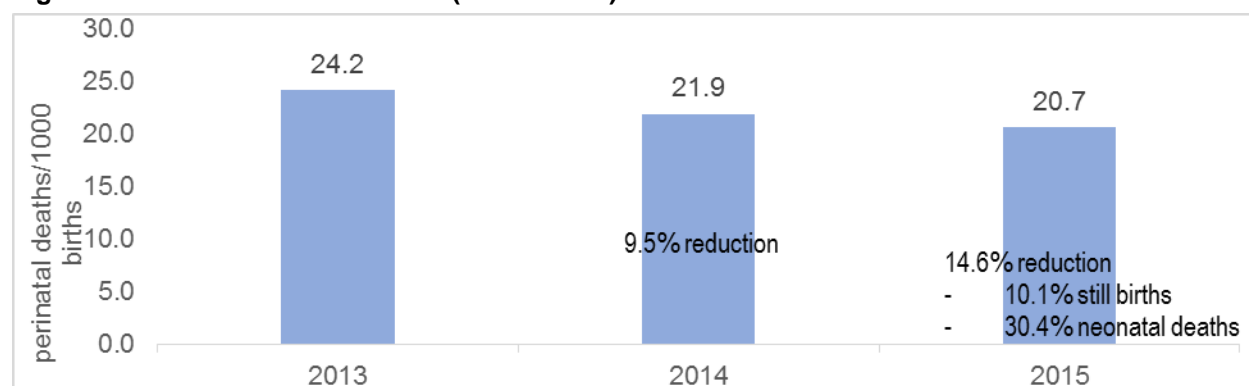
- **Reduction in perinatal and neonatal mortality (Q1).** Overall, there has been a 5.9% reduction in perinatal mortality since starting this work due to a 15.6% reduction in in-hospital neonatal mortality and a 3.3% reduction in stillbirths from July 2013 to November 2015 (**Figure 104**). This is equivalent to 19 deaths averted per month compared to before we started working in these facilities. Spreading this improvement to entire country could save 31,000 lives per year. A sex-disaggregated data analysis in a sample of the sites found no gap that needed to be addressed.

Figure 104. India: Perinatal mortality, 115 facilities (July 2013 – Nov 2015)



- **Reduction in perinatal mortality and stillbirths over lifetime of the project (Q1).** We compared perinatal mortality across three time periods: July-November in 2013, 2014, and 2015 (these were the five months with data from all three years). Compared to the 2013 baseline, there was a 9.5% reduction in 2014 and a 14.6% reduction in 2015. Breaking down the stillbirth and neonatal deaths in 2013 and 2015, there has been a 10.1% reduction in stillbirths and a 30.4% reduction in in-hospital neonatal deaths (**Figure 105**).

Figure 105. India: Perinatal deaths (2013 – 2015)



	July-Nov 2013	July-Nov 2014	July-Nov 2015
<i>Total births</i>	74,645	78,198	67,662
<i>Stillbirths</i>	1411 (1.89%)	1380 (1.76%)	1149 (1.70%)
<i>In-hospital neonatal deaths</i>	398 (0.53%)	336 (0.43%)	251 (0.37%)
<i>Perinatal deaths (per 1000 births)</i>	24.2	21.9	20.7

- **Qualitative study on perceptions of QI support conducted in scale-up districts (Q1).** Thirty-six (36) health care workers, 8 facility leads and 11 block (sub-district) leaders working in blocks where QI was being spread through the government system were interviewed by ASSIST staff. The study was designed to identify how staff in these districts perceived the QI support in order to learn about how to provide support to other groups in scaling up.
- **Results of the qualitative study (Q1):**
 - Initial QI training was well rated (4.7/5 on a Likert scale) and all staff were involved in QI projects. Staff were most confident in their ability to form a team and pick an aim and least confident in their ability in other QI steps (**Table 11**).

Table 11. India: Staff ratings on their confidence in seven activities in a quality improvement project (n=36)

QI activity	Score*	QI activity	Score*
Picking an improvement aim	4.4	Developing change ideas	3.7
Form a team	4.5	Testing changes	3.7
Analyze the system	3.9	Implementing successful changes	3.7
Developing a measurement system	3.7		

*0=not confident, 5= fully confident

- The most common suggestion for how to improve the QI training was to organize visits to facilities already using QI approaches.
- **Initial QI work:** Respondents felt that QI led to work being more organized, with fewer errors, less time consuming and easier to see and track progress. The biggest challenges were involving non-QI team members in QI work and the frequent transfer of staff between facilities. 75% of respondents spent less than 15 minutes a day on QI activities with many respondents stating that they spent no additional work but that QI was part of their everyday work. 17% spent more than 30 minutes a day. 94% of respondents stated that 0-20% of their QI work required additional data – most could be done with existing data.
- **Coaching visits:** 77% of health workers felt that coaching visits were either useful or extremely useful. No one felt they were not useful. The most useful aspect of coaching was

hands on support (75% of respondents), facilitating communication between workers (56%) provision of job aids (39%) and QI training (31%).

- **Facility and block managers:** Only 12 of the 20 managers had been trained in QI but they all ranked it 5/5. All were involved in QI work, 64% as part of a team, 27% as a coach and 73% receiving reports. All block managers wanted to spread QI to other facilities but only 1 (9%) had done so.
- **Summary:** Scale-up through the government system is being well received by health workers and managers. Based on this study we will focus future efforts on:
 - More involvement of leaders at the start of the project and a greater focus on clarifying the management structure to support QI (only 73% of leaders were getting reports on QI activities)
 - Greater emphasis on helping managers learn how to scale up improvement effort
 - Clarifying the best way to sequence QI training and supporting staff to build their skills in developing and testing changes

Activity 1b. Build the skills of interested stakeholders to support the spread of improvement methods

OVERVIEW

ASSIST focuses on building relationships with domestic institutions that we can support to become leaders in implementing and spreading QI approaches. We achieve this by building the skills of individuals to become leaders in using QI methods, building the capacity of institutions that are invested in using and promoting QI, and building the skills of individuals and institutions to support other stakeholders in India to learn and apply QI.

KEY ACCOMPLISHMENTS AND RESULTS

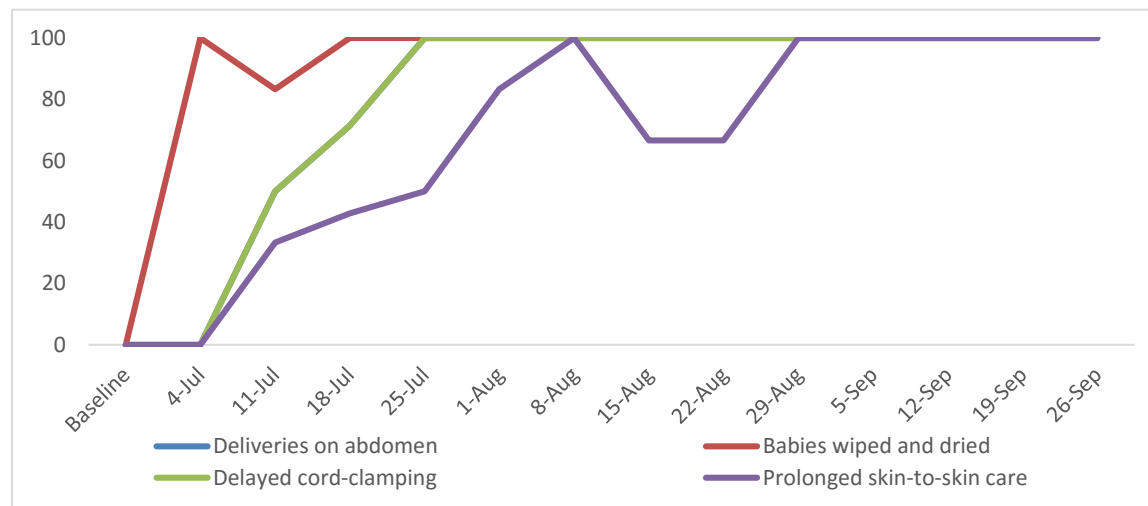
- **Supported AIIMS Delhi to hold a two-day QI workshop for the six other AIIMS campuses in the country as well as three other leading medical colleges** (Aug 2016). Teams from these facilities are developing their own QI projects and planning support for other facilities in their catchment areas.
- **Leadership in AIIMS Delhi agreed to form a cadre of QI nurses in the institution to support new QI teams and committed \$600,000 to support the spread of QI approaches internally** (Q4).
- **Supported AIIMS Delhi to run a three-day workshop to support four medical colleges in West Bengal to design eight initial QI projects** (July).
 - Within two months, seven of the eight projects were completed (**Table 12**), and the State of West Bengal is considering how to spread QI approaches from these medical colleges to peripheral facilities.

Table 12. India: Results from initial QI projects in medical colleges in West Bengal

Facility	Department	Aim	Result
SSKM	OB	Increase delayed cord clamping	32% to 80%
SSKM	Peds	Reduce nasal injury in babies on CPAP	Bridge injury 50% to 16% Columella injury 20% to 0%
NRS	OB	Increase use of antenatal corticosteroids	40% to 80%
NRS	Peds	Decrease neonatal hypothermia	100% to 0%
KMCH	OB	Improve infection prevention during vaginal delivery	Cleaning increased from 10% to 80%
KMCH	Peds	Decrease number of hours per day that healthy babies are staying in NICU	61 h/d to 24 h/d
RGKAR	Peds	Exclusive breastfeeding in NICU	Improved but data was unclear

- **Improved care within NICU at Lady Harding Medical College (Q4).** Decreased ambient noise within the NICU from a mean of 70dB to 54dB. Decreased the percentage of hypothermic babies admitted to NICU from 84% to 45%.
- **Reviewed how to provide QI support with IAP staff who will be providing QI support to facilities in 6 districts (June 2016).**
- **We have trained all IAP staff working on the Helping 100k Babies Survive and Thrive project and they have supported 51 facilities to form QI teams and start improvement projects (Q4).** Twenty-four of these teams are now submitting monthly data (the rest were formed in September so it is too early to see if they are going to submit data). **Figure 106** shows improvements in newborn care at PHC Adesar, where there are on average 17 babies born each month, after clinical and QI support from IAP.

Figure 106. India: Improvements in newborn care at PHC Adesar after clinical and QI support



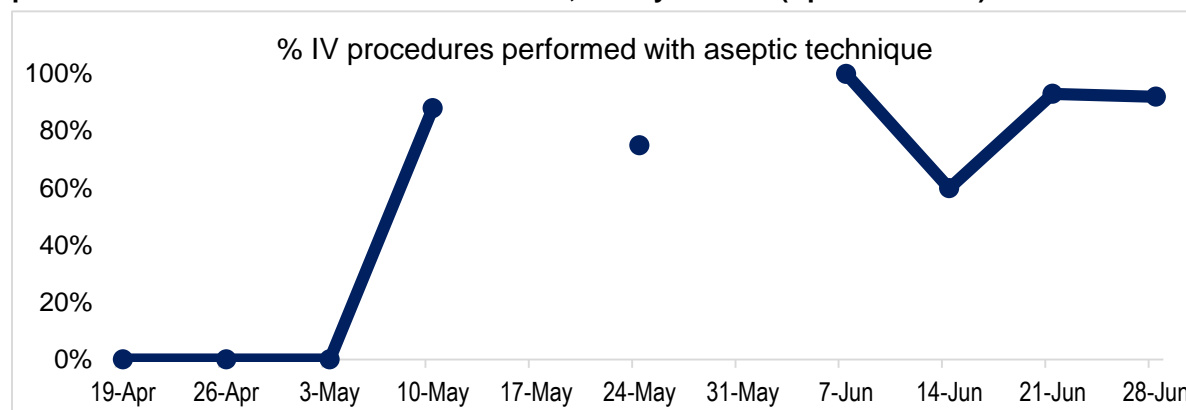
from IAP (July – Sept 2016)

- **Participated in two-day workshop in Himachal Pradesh** in collaboration with AIIMS and IPE to support Himachal Pradesh to develop a quality of care system in alignment with the WHO framework (April 2016).
- **Supported 33 staff from eight departments in Tanda Medical College to develop initial QI projects (June 2016).** These staff will use these skills internally but will also serve as a QI resource for the state in rolling out their QI strategy.
- **Develop a state-wide Quality of Care Program in Himachal Pradesh (Q3 and Q4).** We are working with the State of Himachal Pradesh, AIIMS, National Health Systems Research Centre (a parastatal group with a quality assurance program), IPE Global (a USAID-funded implementation project) to develop a state-wide Quality of Care Program that integrates quality improvement with quality assurance and training approaches. The action plan has been approved by the State Health Commission and we are currently developing a detailed implementation plan. The State has committed around \$300,000 for the plan.
- **Providing Sitaram Bhartia Institute for Science and Research with support for planning first internal QI learning session and in developing strategies for getting clinicians more involved in QI (Q3).**
- **Virtual support of QI (Q3 and Q4).** We are developing different virtual systems for QI training and coaching to see if there are less intense ways of providing QI support.
 - In Q3, we started using WhatsApp to coach a large facility in Delhi. WhatsApp coaching gives us great details on team progress and helps to identify when the team is having problems in the different QI steps. For example, WhatsApp has already enabled coaching facility members to improve aseptic technique with IV procedures in a neonatal intensive care unit, from 0% in April to 88% in June 2016 (**Figure 107**). WhatsApp was less useful in providing

support when the team was having problems. We will continue to need to have strategies using more intense support either via telephone or in person.

- In Q4, we developed protocol for qualitative assessment of WhatsApp coaching with a new QI team.

Figure 107. India: Using WhatsApp to coach a facility on improving aseptic technique with IV procedures in a neonatal intensive care unit, facility in Delhi (Apr – Jun 2016)



IMPROVEMENT IN KEY INDICATORS

Indicators α = proportion χ = average	Baseline (Dec 2013) Approx. 100 sites	Aug 2015 Approx. 150 sites*
α of newborns who were assisted for breathing out of total newborns reviewed*	17% *	2%
α of newborns made dry and provided warmth immediately after birth out of total newborns observed	47%	100%
α of newborns who were provided sterile cutting and clamping of cord out of total newborns reviewed	47%	100%
α of newborns breastfed within one hour of birth	87%	88%
α of newborns given injection of vitamin K at birth	55%	98%
α of vaginal deliveries for which oxytocin was administered within one minute of birth of baby	16%	99%
χ number of times vitals (both blood pressure and pulse) checked and recorded within first 6 hours PP	0.8	3.4
α of ANC visits during which hemoglobin of pregnant woman was checked and documented	59%	88%

*These are the last updates due to the Activity 1a closing down in December 2015

SUSTAINABILITY AND INSTITUTIONALIZATION

In addition to working with the government on scale-up, our current focus is working through domestic organizations to institutionalize and sustain QI capacity in India. AIIMS, the largest medical college in the country, has requested our support in developing a quality management system for the institute. ASSIST has trained teams from six departments. These teams have all achieved impressive results and more teams have started to join. Currently, there are teams from 12 departments working on quality improvement projects. We are discussing with AIIMS developing a QI curricula and training program for students, instituting a formal QI system across the institution, and hosting QI events for

external groups.

We are supporting the Indian Academy of Pediatrics (IAP) to implement the 'Helping Babies Survive' Initiative in five districts to improve neonatal care. ASSIST is supporting IAP to develop the QI components.

We are also interested in moving into the private sector. Currently, we plan to work with one private facility – Sitaram Bhartia Institute for Science and Research. They have a well-established QI program and have achieved great results. They have asked ASSIST to help them with how to do more work faster and to better involve front line workers.


INDONESIA

BACKGROUND

In 2012, the USAID HCI Project began an evaluation of the quality of care and patient outcomes in Class A Indonesian hospitals. In January 2014, ASSIST continued working with local partners at the University of Indonesia (UI) Center for Family Welfare (CFW) to conduct a mid-term and endline evaluation to compare the quality of care provided in hospitals accredited by the Joint Commission International (JCI) with that in hospitals accredited by the Indonesian Hospital Accreditation Commission (KARS) and those not undergoing hospital accreditation (NHA). Data collection and analysis and report writing for the mid-line phase of the Hospital Accreditation Process Impact Evaluation (HAPIE) Study were all completed by Q3, FY15. In FY16, we began the third and final phase of the study in which endline data would be collected from the same nine participating hospitals on most of the same measures that were collected in the baseline and midline phases. In Q4, data collection has been completed, and data entry and cleaning are currently underway.

PROGRAM OVERVIEW

What are we trying to accomplish?	At what scale?
1. Hospital Accreditation Process Impact Evaluation – completing study and disseminating results	
<ul style="list-style-type: none"> Evaluating the quality of care provided in hospitals undergoing JCI and KARS (<i>Komisi Akreditasi Rumah Sakit</i>) accreditation in Indonesia 	9 hospitals in three provinces: 3 hospitals are pursuing JCI accreditation 2 hospitals are pursuing KARS accreditation 4 hospitals are not seeking hospital accreditation until 2015 (NHA)

 Cross-cutting Activity

Activity 1. Hospital Accreditation Process Impact Evaluation (HAPIE) – completing study and disseminating results

OVERVIEW

The objectives of this activity are to:

- Conduct the endline quantitative and qualitative evaluation of the quality of care and patient outcomes in Class A Indonesian hospitals that have undergone KARS with or without JCI accreditation.
- Build the capacity of the data collectors and analysts at Center for Family Welfare – Universitas Indonesia who will be charged with the main information gathering and processing part of the study.
- Disseminate findings from the study to Indonesian stakeholders as well as the wider public health community.
- Encourage communication between ASSIST and Badan Penyelenggara Jaminan Sosial (BPJS, Indonesian Social Security System) to inform them of how the findings from the HAPIE study can promote policies to facilitate improvements in the quality of care linked to payment under the nationwide single-payer health insurance system, National Health Insurance (JKN) system.

KEY ACCOMPLISHMENTS AND RESULTS

- **Dr. Edward Broughton traveled to Indonesia to provide technical assistance to the CFW/UI team and to coordinate activities with them in preparation for the end line data collection, analysis and reporting** (Nov 20-Dec 12, 2015). Other activities during the trip were:
 - A meeting with the activities offices from USAID Indonesia to discuss progress on the HAPIE study, the purpose of the visit and plans for the meeting with BPJS (implementer of the Indonesia national health insurance).
 - Two meetings with USAID officers and the BPJS officers concerned with hospital data were convened to discuss quality and how BPJS data can be used to stimulate better care in hospitals. Also discussed was whether a mechanism for analyzing and feeding back the information to hospitals is designed along with payment system that reward high quality, evidence-based health care.
 - A comprehensive dissemination was developed for the final results of the HAPIE study.
- **A concept note was written and sent to USAID Indonesia outlining potential activities to be conducted with BPJS if they consent to such assistance** (Feb 2016).
- **Anhari Achadi made a presentation to the new Director of Health Services to secure approval to complete the final stage of data collection in the nine hospitals** (March 2016).
- **Data collection in seven of nine hospitals was completed** (Q3). Those seven hospitals are:
 - Saiful Anwar Hospital in Malang, East Java
 - Kariadi Hospital in Semarang, Central Java
 - Sardjito Hospital in Yogyakarta
 - Kandou Hospital in Manado, North Sulawesi
 - Mohammed Djamil Hospital in Padang, West Sumatra
 - Mohammed Husein Hospital in Palembang, South Sumatra
 - Persahabatan Hospital in Jakarta, West Java
- Data collected included:
 - Patient exit interviews on their experience during hospitalization
 - Case Notes Review of four selected diseases (pediatric pneumonia, delivery, myocardial infarction, hip fracture)
 - Hospital secondary data on bed occupancy proportions, adverse events and other parameters.
 - Observation of hospital facilities
 - In-depth interviews with hospital management
 - In-depth interviews with local BPJS (Social services administration) personnel for information on implementation of (JKN) National Health Insurance in the respective hospitals
- **Data collection was completed in the remaining two hospitals** (Q4): Fatmawati Hospital in Jakarta, West Java; Hassan Sadikin Hospital in Bandung, West Java
- **As the data were collected, they were entered into the appropriate databases, ready for analysis once data collection is complete.** Cleaning of the data is underway for data from all nine hospitals.
- **Preparing presentations at international conferences, based on accepted abstracts** (Q4): ISQua Conference in Tokyo, October 16-19, 2016 and Fourth Global Symposium on Health Systems Research in Vancouver Nov 14-18, 2016.

SUSTAINABILITY AND INSTITUTIONALIZATION

Communication with the USAID Mission is continuing on the subject of disseminating the results of the study to the Indonesian MOH and to officials at the Indonesian Social Security System (BPJS), the organization implementing the national health financing mechanism, JKN. Meetings are planned for Q1, FY17.

PAKISTAN

BACKGROUND

The USAID Mission in Pakistan requested that ASSIST conduct two cost-effectiveness analyses on activities they had supported in previous years. One is a maternal and child vaccination program, and the other is a family planning program. These studies were commissioned to provide information on program efficiency to USAID and local and national public health officials as the basis for evidence-based decision-making for continuation of these programs when USAID-support for them ceases.

1. In 2014, USAID implemented a program of community-based advocacy, registration of children and women eligible for vaccination and capacity development of the district health management teams to improve their monitoring and supervision systems to increase the demand for vaccination services. The USAID Pakistan mission has requested the USAID ASSIST Project to determine the cost-effectiveness of the program in order to evaluate whether it should be scaled up in its current form or modified.
2. The Pakistan mission has also supported a voucher program implemented by the Ministry of Health whereby women of reproductive age are given vouchers for family planning consultations, contraception services, and goods to improve access to such fertility services. The mission has requested a cost-effectiveness analysis be conducted on this program to determine its level of efficiency to guide recommendations for scale-up or modification.

In FY16 ASSIST started these studies, and in FY17 the project plans to complete them and present the results.

Scale of USAID ASSIST's Work in Pakistan



■ Health Systems Strengthening

PROGRAM OVERVIEW

What are we trying to accomplish?	At what scale?
1. Cost-effectiveness analysis of vaccination program	
<ul style="list-style-type: none"> • Provide rigorous objective information of the efficiency of the vaccination promotion program 	<ul style="list-style-type: none"> • Intervention was conducted in 4 districts of Sindh and all will be involved in this analysis.

What are we trying to accomplish?	At what scale?
2. Cost-effectiveness analysis of family planning voucher program	
<ul style="list-style-type: none"> Provide rigorous objective information of the efficiency of the family planning voucher program 	<ul style="list-style-type: none"> Intervention was conducted in 1 or more districts and all will be involved in this analysis.

Cross-cutting Activity

Activity 1. Cost-effectiveness analysis of vaccination program

OVERVIEW

The purpose of this activity was to evaluate and interpret findings and their policy implications on the cost-effectiveness of the vaccination promotion intervention implemented in four low-coverage districts in Sindh Province as part of the HSS component of the USAID-funded Maternal and Child Health Program.

KEY ACCOMPLISHMENTS AND RESULTS

- Completed the first draft of the write-up and dissemination of the results of the economic analysis of the vaccination program (Q4).** More than 168,000 women of reproductive age (WRA) in 32 districts of Sindh Province received FP services through the voucher program between October 2013 and June 2016 at a total cost of \$3,278,000, including the cost of paying for the vouchers redeemed for payment by the participating facilities. This is a total cost for two years of \$19.50 per recipient WRA and an incremental cost-effectiveness of \$3.67 per additional couple years of protection achieved by the program compared to business-as-usual.

Activity 2. Cost-effectiveness analysis of family planning voucher program

OVERVIEW

This activity was conducted to evaluate the cost-effectiveness of the “Suraj Social Franchise” (SSF) family planning voucher program conducted in 29 districts of Sindh Province and three districts in Punjab Province.

KEY ACCOMPLISHMENTS AND RESULTS

- Completed the first draft of the write-up and dissemination of the results of the economic analysis of the SSF family planning voucher program (Q4).** The total cost of the program from the perspective of the program funder, USAID, was US\$1.56 million for all activities since its inception in February 2014. The total number of children reportedly provided routine childhood immunization through the program was over 329,000 and the total number of pregnant women receiving tetanus toxoid vaccination over the same period was over 111,000. From the perspective of USAID, the incremental cost-effectiveness ratio (ICER) of the program compared to our estimate of the business-as-usual scenario was US\$1.30 per disability-adjusted life year (DALY) averted (95% CI: US\$1.08 – 1.58). Including estimates of the cost to the health system of treating vaccine-preventable morbidity and mortality from the perspective of the health system that would incur such costs, the ICER is about -US\$97 per DALY averted [95% CI: -US\$129 – (-US\$66)].

LATIN AMERICA

NICARAGUA

BACKGROUND

The USAID ASSIST Project began activities in Nicaragua in 2014, continuing the work started by the USAID HCI Project in the country’s health training institutions. Supported by the PEPFAR, ASSIST worked to institutionalize improvement methods and pre-service training in HIV services in the medical and nursing schools of nine public and private universities in Nicaragua. In its first year of

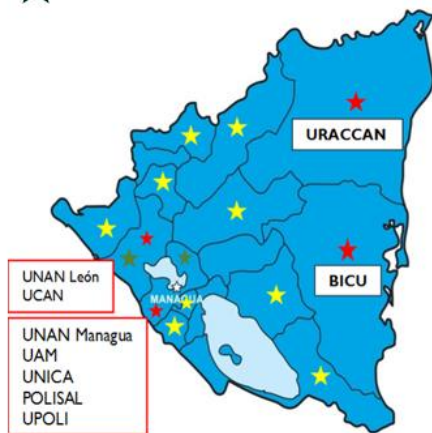
operation (FY14), ASSIST focused on supporting the development of skills among nursing and medical faculty to integrate changes in their coursework to promote quality of HIV care. In FY15 and FY16, ASSIST provided technical assistance to 9 of the 13 universities (UNAN Managua, UNAN Leon, UCAN, UAM, UNICA, URACCAN, BICU, UPOLI and POLISAL) in the country (69% coverage). Technical assistance was to promote continuous quality improvement to modify teaching and evaluation methodologies for HIV topics included in nursing and medical study programs, using the rapid cycle improvement approach. This technical assistance has highlighted the important link between the training received in nursing and medical study programs and the future provision of health services.

In addition, ASSIST worked to reduce stigma and discrimination towards PLHIV and of sexual diversity at universities and to promote gender equity. ASSIST is also providing technical assistance to six sexual diversity organizations (ADESENI, ODETRANS, GAO, OVI, CEPRESI, and ANICP+VIDA) to help implement the quality management program designed in 2015 and to support continuous quality improvement of their services. In FY16, ASSIST began a new activity in Nicaragua to develop three virtual diploma courses—Research Methodology, Quality Management, and HIV Combination Prevention and Care—within the 9 universities and 10 NGOs.

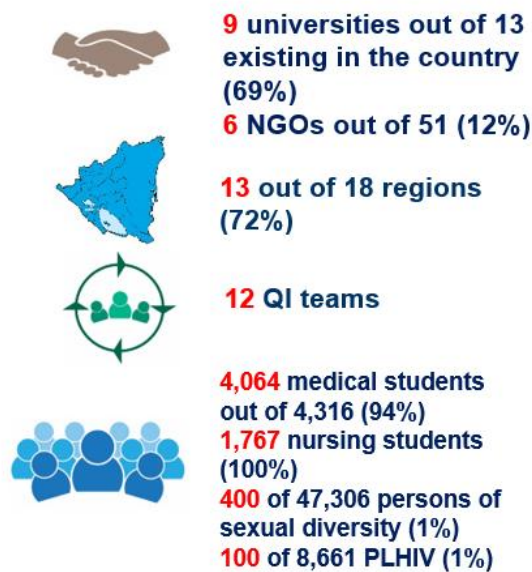
ASSIST’s work is in line with USAID strategies in Nicaragua and with PEPFAR’s strategy for the Central American Region, contributing to Goal 2 of the PEPFAR cooperation framework to strengthen health systems. Quality improvement efforts and related interventions are also contributing to reaching the 90-90-90 goal by 2020 agreed upon with the Pan American Health Organization/World Health Organization and the Joint United Nations Programme on HIV/AIDS in order to reduce new HIV infections by improving the quality of life of people living with HIV, decrease AIDS mortality by improving the diagnosis of HIV, increase the number of people on ART; reduce their viral load to undetectable values, and reduce stigma and discrimination.

Scale of USAID ASSIST’s Work in Nicaragua

- ★ Main campus
- ★ Satellite campus
- ★ NGO



■ HIV/AIDS



PROGRAM OVERVIEW

What are we trying to accomplish?	At what scale?
1. Implement continuous quality of teaching	
<ul style="list-style-type: none"> University teachers introduce into their academic activities the methodology of continuous quality improvement with rapid cycle 	<ul style="list-style-type: none"> 13 out of 18 regions (72%) 9 out of 13 universities (69%) (UNAN Managua, UNAN Leon, UCAN, UAM, UNICA, URACCAN, BICU, UPOLI, and POLISAL)
2. Provide tools and knowledge to nursing and medical faculty on gender, gender-based violence and human trafficking and to conduct activities to promote respect for human rights of people living with HIV and of sexual diversity	
<ul style="list-style-type: none"> Develop university teachers' skills for teaching gender issues and promote gender equality in the classroom Reduce stigma and discrimination against people with HIV and sexual diversity among university teachers and students 	<ul style="list-style-type: none"> 13 out of 18 regions (72%) 9 out of 13 universities (69%) (UNAN Managua, UNAN Leon, UCAN, UAM, UNICA, URACCAN, BICU, UPOLI, and POLISAL) 4,064 medical students out of 4316 (94%) 1,767 nursing students (100%)
3. Design and implement three virtual diploma courses at universities on Research Methodology, Quality Management, and HIV Combination Prevention and Care	
<ul style="list-style-type: none"> University teachers develop skills for teaching the subjects of continuous quality improvement, research and prevention of HIV 	<ul style="list-style-type: none"> 13 out of 18 regions (72%) 57 University nursing and medical teachers 33 NGO health promoters
4. Support implementation of activities defined in the quality management program among six NGOs that support people of sexual diversity and people living with HIV	
<ul style="list-style-type: none"> Improve the quality of the services for HIV prevention provided by the sexual diversity organizations 	<ul style="list-style-type: none"> 6 of 51 NGOs (ADESENI, ODETRANS, GAO, OVI, CEPRESI and ANICP+VIDA) (12%) 400 of 47,306 persons of sexual diversity (1%) 100 of 8,661 PLHIV (1%)

Improvement Activity
 Cross-cutting Activity

Activity 1. Implement continuous quality of teaching

OVERVIEW

To identify gaps among nursing and medical students, surveys assessing baseline knowledge, attitude, and practices (KAP) were conducted in 2014 and 2015. After analyzing the results from the first baseline measurements, medical and nursing faculty started adjusting their study programs to include HIV topics into their classes. They also made changes to various teaching methods, including checklists, case analyses, debate forums, and videos with testimonials from people with HIV and people of sexual diversity. In addition, they included the topic of HIV in university outreach activities held with communities and developed activities to promote respect for the rights of people with HIV and AIDS.

KEY ACCOMPLISHMENTS AND RESULTS

- During FY16 the project completed the second measurement of the KAP surveys in HIV among medical and nursing students in six universities**—UNAN Managua, BICU, UCAN, URACCAN, UPOLI and POLISAL—to compare results before and after technical assistance interventions. Results show that medical students from four universities (BICU, UCAN, URACCAN and UNAN Managua) scored 9 percentage points higher in knowledge and 14 percentage points higher in attitudes in the second round of the survey when compared to baseline scores. The greatest differences were observed among students from universities BICU

and URACCAN (Table 13). Among nursing students at universities POLISAL, UPOLI and BICU, students scored 5 percentage points higher for both knowledge and attitudes; these were higher among UPOLI students from the senior nursing associate group (Table 14).

- **Activities implemented by universities to achieve these changes were:**
 - Organized clinical rotation of medical students at the HIV hospital and outpatient care services; thus, facilitating interaction with HIV patients, increasing HIV awareness among students and strengthening their knowledge to provide care for people with HIV.
 - Organized exchange sessions among nursing students and people of sexual diversity to raise awareness on the topic of discrimination through life experiences told by the latter.
 - Organized student-designed mural contests with the motto “Champions for reduction of HIV stigma and discrimination among key society populations and nursing students.”
 - Formed nursing student teams to facilitate HIV teaching to high school students, under direct supervision of teachers.
 - Read quotes about stigma and discrimination reduction towards people of sexual diversity and people with HIV at the beginning of each class.
- Reviewed and analyzed HIV KAP survey results with students to clarify doubts and strengthen knowledge in each survey topic.
- Introduced the subject of HIV into the epidemiology class using the teaching package methodology (clinical cases and check lists).
- Organized HIV counseling sessions targeting key populations during community-based student rotation as part of their practice.

Table 13. Nicaragua: Results from HIV KAP surveys conducted among medical students (2014-2016)

Topic	BICU Medicine		% point difference	UCAN		% point difference	URACCAN			UNAN Managua FY 2016					
	Aug 15	Dec 15		June 15	Nov (2015)		(4 th and 5th year) Sep 14	(6th and 7th year) July 2016	% point difference	Female N=159			Male N=105		
										Feb/June	August	% point difference	Feb/June	August	% point difference
n=	22	17		34	15		20	16		78	81		78	46	
Knowledge questions	78	97	19	82	85	3	70	79	9	85	89	4	84	85	1
Transmission ways	88	100	12	92	95	3	89	90	1	94	97	3	94	94	0
HIV risk factors	98	98	0	90	92	2	86	87	1	94	96	2	96	96	0
HIV maternal child transmission	85	99	14	87	90	3	76	78	1	89	90	1	85	88	3
Principles of counseling (knowledge)	69	98	29	72	79	7	40	68	28	80	83	3	74	76	1
Care for people with HIV (knowledge)	69	92	23	66	70	4	63	73	10	78	88	10	75	77	2
Antiretroviral Therapy	55	96	41	77	81	4	63	80	18	74	78	4	74	78	4
Attitude questions	67	89	22	61	69	8	61	74	13	70	79	8	71	76	5
Principles of counseling (attitude)	61	100	39	47	83	36	45	75	30	77	77	0	64	65	1
Human rights – stigma and discrimination	84	93	9	68	73	5	76	80	4	78	83	5	81	80	-1
Care for people with HIV (attitude)	75	84	9	58	63	5	52	69	17	63	76	13	64	75	10

Table 14. Nicaragua: Results from HIV KAP surveys conducted among nursing students (2015-2016)

Topic	POLISAL		% point difference	UPOLI						BICU Nursing		
	July 15	nov-15		Senior bachelor in nursing students			Senior associate in nursing students			March 16	August 16	% point difference
				March 16	June 16	% point difference	March 16	June 16	% point difference			
n=	26	23		34	34		24	24		13	14	
Knowledge questions	76	85	9	82	88	6	80	90	10	79	87	8
Transmission ways	92	94	2	99	97	-2	90	97	7	89	98	9
HIV risk factors	85	93	8	89	94	5	89	93	4	88	92	4
HIV maternal child transmission	88	94	6	92	94	2	91	96	5	81	86	4
Principles of counseling (knowledge)	59	78	19	75	88	13	65	92	27	75	91	16
Care for people with HIV (knowledge)	54	62	8	69	73	4	78	78	-	64	71	7
Antiretroviral Therapy	67	76	9	64	83	19	65	85	20	79	80	2
Attitude questions	62	69	7	75	81	6	69	87	18	79	84	5
Principles of counseling (attitude)	56	67	11	89	94	5	50	90	40	88	96	8
Human rights – stigma and discrimination	76	79	3	77	88	11	67	87	20	86	90	5
Care for people with HIV (attitude)	56	67	11	73	79	6	70	86	16	72	76	4

By the end of the FY16, seven of the nine universities (78%) included the topic of HIV in their study programs, which enabled doctors and nurses who graduated from these universities to be better prepared to provide care for people with HIV. Universities are now working continuously and systematically to reduce gender-based violence and stigma and discrimination towards people with HIV and of sexual diversity. **Table 15** shows a summary of progress reached by universities.

Table 15. Nicaragua: Summary of activities and progress reached by universities in transferring MINSA's norms and protocols on HIV (Oct 2014 – Sept 2016)

Universities	Developing competencies among teachers to use the teaching package	Training teachers on gender, stigma and discrimination and the new HIV care protocol	HIV KAP comparative surveys, rounds 1 and 2	Adjusting study programs and micro programming, number of hours	Continuous quality improvement activities
UNAN Managua	Completed	Completed	Completed	Completed	Completed
UNAN León	Completed	Completed	Completed	Completed	Completed
UCAN	Completed	Completed	Completed	Completed	Completed
UPOLI	Completed	Completed	Completed	Completed	Completed
POLISAL	Completed	Completed	Completed	Completed	Completed
BICU	Completed	Completed	Completed	Completed	Completed
URACCAN	Completed	Completed	Completed	In Progress	In Progress
UNICA	Completed	Completed	Completed	In Progress	In Progress
UAM	Completed	Completed	Not completed	In Progress	In Progress

Source: USAID | ASSIST Files

Completed In Progress Not completed

Activity 2. Provide tools and knowledge to nursing and medical faculty on gender, gender-based violence and human trafficking and to conduct activities to promote respect for human rights of people with HIV and of sexual diversity

OVERVIEW

In FY16, ASSIST designed a training module on gender and gender-based violence (GBV). The module introduced new methodologies to teach gender and GBV (e.g., participatory discussions, case studies, testimonials, film forums). It also included group work on GBV affecting vulnerable populations and people of sexual diversity in Nicaragua, including analyzing the magnitude and frequency of gender-based violence. In addition, the standards and protocols for GBV prevention and care for survivors of GBV, particularly children, adolescents, and women, were introduced.

Additionally, training workshops were organized using this training module to build the capacity of medical and nursing faculty to deliver gender and GBV content in their curricula.

ASSIST also supported communication activities to motivate teachers and students to change attitudes, promoting gender equality. These included:

- Teachers and students working on a campaign against stigma and discrimination towards people of sexual diversity and the lesbian, gay, bisexual, transexual, and/or inter-sex (LGBTI) community, which included creating murals and banners on respect for human rights of people of sexual diversity, with students and teachers actively working together.
- Five-minute reflections in the syllabus during the first hour of class to motivate the promotion of gender equality and respect for the rights of PLHIV and the LGBTI community.
- Analyzing situations that support or hinder actions to drive gender equality.
- Including gender as a research topic for students.

KEY ACCOMPLISHMENTS AND RESULTS

- **ASSIST developed competencies among 96 teachers (25 males and 71 females) to teach gender and GBV subjects at seven universities (FY16).** Learning was assessed during training workshops through pre- and post-tests. Results showed improvements in knowledge and attitudes post-training (see **Table 16**). The main impact at the university level is guaranteeing respect for human rights of the LGBTI population.

Table 16. Nicaragua: Improvements in knowledge and attitudes following gender and GBV training

University	Initial Score (%)	Final Score (%)	Increase (% points)
BICU	58	98	40
UCAN	78	91	13
UNAN León	78	96	18
UNAN Managua	75	93	18
POLISAL	61	87	26
UNICA	63	84	21
UPOLI	67	91	24
Global	70	92	22

Source: USAID | ASSIST Files

Activity 3. Design and implement three virtual diploma courses at universities on Research Methodology, Quality Management, and HIV Combination Prevention and Care

OVERVIEW

The three virtual courses (Research Methodology and Continuous Quality Improvement with UNAN León and the HIV Continuum of Care with UNAN Managua) were completed in FY16. These courses

began simultaneously in mid-April and lasted for 6 months. Members from 11 non-governmental organizations working for HIV prevention participated (IXCHEN, CEPS, CEGODEM, ASONVIHSIDA, MDS RACCS, FSL, GAO, ODETRANS, ADESENI, CEPRESI, and ANICP+Vida) as well as teachers from 10 universities (POLISAL, UPOLI, BICU, URACCAN, UCAN, UNAN León, UNAN Managua, UNICA, UAM, and UNICIT). The virtual courses are a new teaching style developed along with universities to facilitate distance learning and strengthen knowledge among faculty and NGO members.

KEY ACCOMPLISHMENTS AND RESULTS

- **Table 17** shows a summary of the numbers of persons who registered and completed each course.

Table 17. Nicaragua: Summary of results from the three virtual courses

Course	NGO			Universities			Overall Results		
	Enrolled	Retention	Passed	Enrolled	Retention	Passed	Enrolled	Retention	Passed
Research Methodology	9	5 (55%)	2 (40%)	20	12 (60%)	9 (75%)	29	17 (59%)	11 (65%)
Continuous Quality Improvement	10	5 (50%)	4 (80%)	4	4 (100%)	2 (50%)	14	9 (64%)	6 (67%)
HIV Continuum of Care	11	5 (45%)	5 (100%)	16	16 (100%)	16 (100%)	27	21 (78%)	21 (100%)
Total	30	15 (50%)	11 (73%)	40	32 (80%)	27 (90%)	70	47 (67%)	38 (81%)

- **Participants of virtual courses increased HIV knowledge** (April – Sept 2016). Twenty-one (21) participants from universities and NGOs updated their HIV knowledge according to the latest WHO recommendations and the Test and Start strategy. Eleven participants from universities and NGOs developed competencies in research methodology, completing the course with submissions of research papers; five of these with valuable input related to the care of people with HIV.
- **Six improvement plans were developed by participants from universities and NGOs during the quality course to improve various services focused on HIV prevention and care** (April – Sept 2016).

Activity 4. Support implementation of activities defined in the quality management program among six NGOs of sexual diversity and people with HIV

OVERVIEW

Six NGOs (ADESENI, GAO, ANICP+VIDA, OVI, ODETRANS and CEPRESI) received support during FY16 to implement their quality management program and strengthen their continuous quality improvement processes. To this end, quality improvement teams were formed. These teams, along with NGO authorities, led all activities to improve their management processes.

KEY ACCOMPLISHMENTS AND RESULTS

- **Six NGOs have taken concrete measures to strengthen organization management and service provision** (Oct 2015 – Sept 2016). The six NGOs now have:
 - A quality management program designed and under implementation
 - Completed external users' satisfaction and organizational climate measurement
 - Periodically measured their quality indicators and started quality improvement in their processes with rapid improvement cycles implementation
 - 80 NGO promoters trained on the new guidelines for HIV care

- **Table 18** gives a summary of the progress made in implementing tools for quality improvement at the NGOs working on HIV prevention.

Table 18. Nicaragua: Summary of progress in implementing the quality management program at organizations working on HIV prevention (Oct 2015 – Sept 2016)

NGO	Measuring organizational climate	Measuring external user satisfaction	Measuring quality indicators base line	Applying quality improvement rapid cycles
CEPRESI				
GAO				
ADESENI				
ODETRANS				
OVI				
ANICP+VIDA				

Source: USAID | ASSIST Files completed ■ Completed ■ In Progress ■ Not completed

- **Table 19** shows organizational culture measurement results in five out of the six organizations. The form to analyze organizational culture contains 80 statements that are rated by the participant as true or false. Information was analyzed with Excel. The four areas of organizational culture that were measured were: leadership, motivation, reciprocity and participation on a scale from 1-5. A score of “3” is assumed as an average level of the variable under observation; results below 3 are interpreted as unsatisfactory.

Table 19. Nicaragua: Organizational culture measurement results (July 2016)

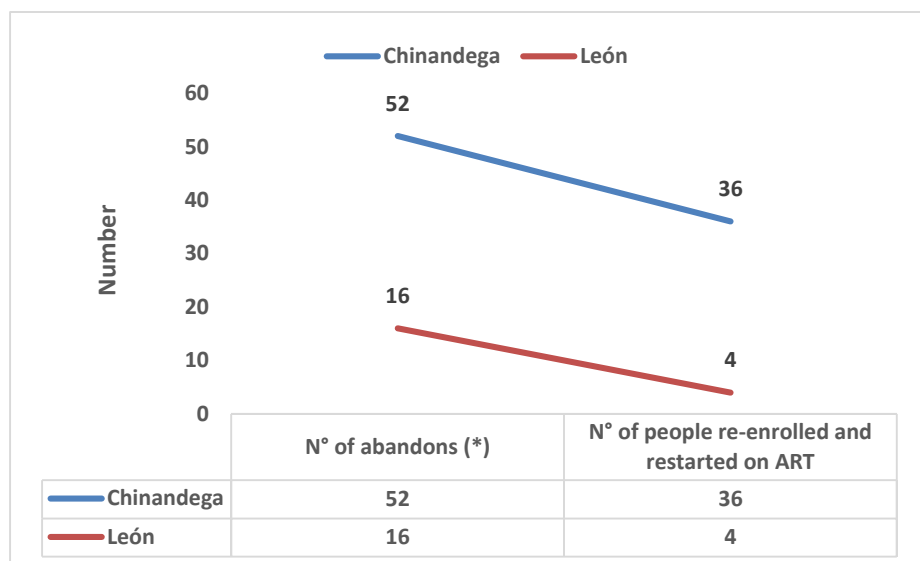
NGO	No. surveys	Leadership	Motivation	Reciprocity	Participation
ADESENI	25	4.44	4.15	4.39	4.01
OVI	6	4.46	3.83	4.42	4.29
ODETRANS	14	3.70	3.57	3.68	2.91
GAO	17	3.65	3.32	3.51	3.26
CEPRESI	14	3.07	2.38	2.82	2.14

Source: USAID | ASSIST Files Organizational culture maximum score is 5.

- **Improvements introduced by the NGO quality teams:** From these results, the quality improvement teams, in coordination with the organizations’ board of directors, decided to implement changes focused on improving: communication between authorities and their collaborators, interpersonal relationships and ways to solve internal conflicts, and participation of collaborators and promoters in tasks and decision making. Specific changes implemented:
 - Creating bulletin boards to share the various scheduled activities, progress, and achievements reached by the organization, as well as anniversaries and birthdays of the month.
 - Recognitions and incentives for the collaborator of the month.
 - Implementing activities to motivate and improve interpersonal relations, such as training workshops targeting staff on communication and conflicts resolution.
 - Using social networks (Facebook, WhatsApp, and Twitter) to maintain constant communication between them.
 - Holding informational sessions with all collaborators to inform everyone on progress and accomplishments of organizations.

- **During the baseline measurement of quality indicators, the teams identified gaps and analyzed their causes while implementing the changes necessary to improve processes.** For the GAO NGO, the work of promoters included home visits to people with HIV who have abandoned antiretroviral therapy with the goal of enrolling them back into care and restarting them on ART. To achieve this:
 - They coordinated with the Ministry of Health (SILAIS León del MINSA), which provided the health units with the addresses of people who have stopped treatment and attending appointments. In turn, authorities from the organization advocated for resources to mobilize promoters, who are distributed throughout the various municipalities.
 - During home visits, promoters conducted a community-based clinical assessment to confirm if the person has been in treatment and to determine whether he or she is currently in care, has been adhering to the prescribed treatment or has stopped, and if he or she has opportunistic infections. They also provided counseling on the importance of ART and remaining adherent. In addition, they provided contact information for multidisciplinary teams at health units and escort HIV patients to the health unit to restart care.
 - All of these activities have been encouraged and supported by the quality improvement team and implemented by promoters. As a result, during August 2016 they were able to restart 40 people on ART who had initially abandoned the treatment (see **Figure 108**).

Figure 108. Nicaragua: Number of people with HIV who were put back on ART, MINSA health units (August 2016)



IMPROVEMENT IN KEY INDICATORS

Activity	Indicators	Target (FY16)	Oct – Dec 2015	Jan – Mar 2016	April – June 2016	July – Sept 2016
Strengthen teachers' capabilities to teach the HIV care protocols	# of teachers trained in the HIV care protocols (according to the WHO 2013 evidence), stigma and discrimination, GBV, and human trafficking	100	12 out of 100 (12%)	*	79 out of 100 (79%)	93 out of 100 (93%)
Implement continuous quality improvement in teaching	# of universities implementing quality improvement cycles	9	3 out of 9 (33%)	3 out of 9 (33%)	2 out of 9 (22%)	7 out of 9 (77%)
Design and implement a quality management program in 6 organizations that support people of sexual diversity and PLHIV	# of organizations with a quality management program	6	5 out of 6 (83%)	6 out of 6 (100%)	6 out of 6 (100%)	6 out of 6 (100%)

*Note: Error with this data.

GENDER INTEGRATION

Baseline data clearly revealed strong sentiments of discrimination and stigma towards PLHIV and of sexual diversity among both students and faculty. To address this, the project worked with faculty to

integrate training on HIV prevention, stigma, discrimination, sexual diversity, and GBV in epidemiology and health research classes, drawing on national laws promoting equal rights and non-discrimination.

ASSIST hypothesized that by engaging medical and nursing students in discussions around human rights and respect for sexual diversity based on national legal protections, efforts to reduce stigma, discrimination, and GBV would be more effective. After receiving training and technical assistance, 96 teachers from seven universities have developed capabilities to teach and promote gender equity in the university and detect and respond appropriately to students experiencing GBV.

SUSTAINABILITY AND INSTITUTIONALIZATION

ASSIST worked on institutionalizing the HIV teaching package in Nicaraguan universities to redefine norms and protocols in medical and nursing study programs with regards to HIV prevention and provision of care. ASSIST's institutionalization and sustainability strategy is to strengthen the Nicaraguan health system through increasing knowledge and capabilities among nursing and medical students.

Universities included the HIV topic in medical and nursing pre-service training. These students are the future doctors, nurses, and leaders within the health system in Nicaragua. Most of them enter the Ministry of Health system and are now prepared to provide better care for people with HIV and contribute significantly to the national response to the epidemic. In addition, universities are working continuously and systematically on reducing gender-based violence and stigma and discrimination.

Neglected Tropical Diseases

ZIKA

BACKGROUND

USAID, the international community, and country governments are responding rapidly to the Zika virus epidemic in Latin America and the Caribbean (LAC) Region. ASSIST was asked by USAID to join this response, beginning in June 2016, to implement activities in El Salvador, Honduras, Guatemala, and the Dominican Republic in order to strengthen the capacity of Zika-related health services to deliver consistent, evidence-based, respectful, person-centered quality care with a focus on pregnant women, newborns and women of reproductive age. ASSIST's activities are closely coordinated with Ministries of Health, National Social Security Agencies, and other USAID-funded projects and mechanisms, including MCSP, K4Health, SIFPO/PSI, SIFPO/IPPF and its in-country affiliates, as well as the CDC, WHO/PAHO, UNICEF, and UNFPA.

ASSIST is leveraging its expertise in continuous quality improvement methodology in order to strengthen health systems inputs and processes for the purpose of obtaining desired health service delivery outcomes, including availability and quality of family planning services (in compliance with USG regulations on family planning and abortions); availability and quality of antenatal care including counseling, screening, diagnosis and follow-up of Zika infection in pregnant women; management of Zika-infected mothers; diagnosis and management of Zika congenital syndrome; psycho-social support for pregnant women with suspected and confirmed cases of Zika; and integration of a gender approach to ensure that males and females of reproductive age are involved in family planning and Zika activities.

In September 2016, USAID asked ASSIST to extend its Zika work to four more countries: Ecuador, Nicaragua, Paraguay, and Peru. Scopes of work for these activities will be developed in FY17.

Scale of USAID ASSIST's Work in Zika



**MOH, PAHO, UNICEF,
UNFPA, MCSP, K4H,
SIPFO/IPPF**

Country	Population, 2014	Number of women ages 15-64, 2014**	% of total women ages 15-64, 2014**
Dominican Republic	10,405,943.00	3,317,639.00	32%
Honduras	7,961,680.00	2,510,811.00	32%
El Salvador	6,107,706.00	2,135,633.00	35%
Guatemala	16,015,494.00	4,848,244.00	30%

PROGRAM OVERVIEW

What are we trying to accomplish?	At what scale?
1. Visit each of the four countries to engage MOHs, UN agencies and national institutions active in the Zika response and establish a country-based ASSIST team	
<ul style="list-style-type: none"> Plan and conduct visits in close coordination with USAID Missions, USAID Zika implementing partners and other agencies Establish a country-based ASSIST team 	El Salvador, Honduras, the Dominican Republic, and Guatemala
2. In prioritized geographical areas and facilities, identify weak areas of Zika-related health care including family planning, antenatal and newborn care	
<ul style="list-style-type: none"> Design and conduct a rapid assessment of availability and quality of FP activities, including availability of methods and other supplies, staff knowledge and skills, and counseling. Organize a rapid assessment of quality of antenatal care including Zika components. Identify key input, process, and outcome areas related to the provision of Zika-related care. Develop and field test quality standards and indicators for Zika-related health care services at different levels of the health system. 	El Salvador, Honduras, the Dominican Republic, and Guatemala 33 Departments/Provinces 88 Municipalities
3. Strengthen Zika-related knowledge and skills among health workers	
<ul style="list-style-type: none"> In collaboration with the Maternal and Child Survival Program (MCSP), develop a training course on Zika-related knowledge and skills for FP and ANC workers. Part of this course will be taught online with tutorial support, and part will be hands-on skills development. The online component will be available to both public and private providers, within and beyond the four target countries. The content will be based on state-of-the-art, evidence-based publications, and will reflect MOH guidelines where appropriate. Develop knowledge management mechanisms to strengthen health workers' capacity and share information among teams and countries. Contribute technical materials to the K4Health Zika Communication Network and the Spanish-language www.maternoinfantil.org. The latter has been widely used by maternal and newborn health workers in the region (more than 1 	El Salvador, Honduras, the Dominican Republic, and Guatemala 33 Departments/Provinces 88 Municipalities

What are we trying to accomplish?	At what scale?
<p>million visits in the last 4 years) and will link Zika materials with other maternal and newborn resources, all in Spanish.</p> <ul style="list-style-type: none"> Develop and conduct two Zika-related webinars to disseminate knowledge and stimulate participation and collaboration within and between countries. Develop a community of practice on Zika field activities for health workers, facilities, and Ministries to share and learn from each other. 	
4. Support Zika-related evidence-based practice	
<ul style="list-style-type: none"> Identify existing, and in close coordination with MCSP, develop new job aids as needed for health care providers, such as brochures and pocket cards 	National and regional levels
5. Start organizing a continuous quality improvement system for Zika	
<ul style="list-style-type: none"> Establish quality improvement (QI) teams at participating facilities in each country Develop an online course on QI methods and techniques adapted to Zika activities Support facility-based Zika QI teams to conduct a baseline for compliance with Zika standards of care, producing quantitative indicators to highlight areas in need of improvement by facility Design an Improvement Collaborative with participation of facility-based QI teams from the 4 countries, to be started in the first quarter of FY17 Design a First Learning Session in each country to discuss baseline findings and start improvement work, to be conducted in the first quarter of FY17 	<p>El Salvador, Honduras, the Dominican Republic, and Guatemala</p> <p>33 Departments/Provinces</p> <p>88 Municipalities</p>
6. Organize and hold an international meeting with participation of QI teams' delegates and partners from the four countries, to share updated technical information, experiences, difficulties, and to draft a work plan for FY17	
<ul style="list-style-type: none"> In coordination with other USAID implementing partners, organize an international meeting of the four countries with delegates from QI teams, MOH, USAID Missions, PAHO, UNICEF, ASSIST, and other country Zika partners Conduct meeting in late August, disseminate agreements and adjusted 1st year work plans as a result of the meeting 	National and regional levels

Improvement Activity
 Cross-cutting Activity

Activity 1. Visit each of the four countries to engage MOHs, UN agencies and national institutions active in the Zika response and establish a country-based ASSIST team

OVERVIEW

With the initiation of Zika activities in June 2016, the USAID ASSIST Project began conducting in-country visits to El Salvador, Honduras, Guatemala, and the Dominican Republic to establish the coordination mechanisms and contacts necessary to strengthen the capacity of Zika-related health services. During these visits, planned in close coordination with USAID Missions, USAID Zika implementing partners and other agencies, ASSIST staff met with MOH authorities and other relevant actors in the health sector (i.e., PAHO, UNICEF, UNFPA, PROFAMILIA, Red Cross, SFH) and identified the organization and structure of the “in country” Zika response effort (leaders, implementers, regulators, etc.) They also recruited technical staff and began establishing country-based ASSIST teams.

KEY ACCOMPLISHMENTS AND RESULTS

El Salvador

- Ministry of Health, Salvadorian Social Security Agency, and Salvadorian Demographic Association (IPPF affiliate) have been engaged in coordinated Zika response (June 2016)
- Chief of Party, Guadalupe Razeghi, and country-based ASSIST team, are in place (Q4)

Honduras

- Ministry of Health, Honduran Social Security Agency, Pan-American Health Organization, and University Hospital have been engaged in coordinated Zika response (June 2016)
- Chief of Party, Norma Aly, and country-based ASSIST team, are in place (Q4)

Dominican Republic

- Ministry of Health, Population Services International, Health Communication Collaborative, Pan-American Health Organization, United Nations Children's Fund, and ProFamilia (IPPF affiliate) have been engaged in coordinated Zika response (June 2016)
- Acting Chief of Party, Gloria Ortega, and country-based ASSIST team, are in place (Q4)

Guatemala

- Ministry of Health, Guatemalan Social Security Agency, Guatemalan College of Obstetricians and Gynecologists have been engaged in coordinated Zika response (June 2016)
- Acting Chief of Party, Melida Chaguaceda, and country-based ASSIST team, are in place (Q4)

Activity 2. In prioritized geographical areas and facilities, identify weak areas of Zika-related health care including family planning, antenatal and newborn care

OVERVIEW

ASSIST is designing and conducting a rapid assessment of availability and quality of family planning activities, including availability of methods and other supplies, quality of antenatal care, including Zika-specific care, staff knowledge and skills, and counseling. ASSIST staff are identifying key input, process, and outcome areas related to the provision of Zika-related care as well as developing and field testing quality standards and indicators for Zika-related health care services at different levels of the health system.

KEY ACCOMPLISHMENTS AND RESULTS

- **Initial analysis of national guidelines and protocols related to the Zika response (Q4)**, including Zika screening and diagnostic protocols and reporting mechanisms, training activities, planned training, and quality improvement activities related to Zika care.
- **ASSIST country teams determined prioritized departments/provinces, municipalities, and health facilities in conjunction with Ministries of Health and Social Security Agencies (Q4)**. This was based on epidemiological profile, entomological indices of Aedes mosquitos, number of confirmed cases of Zika, number of children born with microcephaly, and number of cases of neurological complications.
- **Standard baseline assessment (Q4)**. The data collection protocol and instruments were designed, reviewed, and revised together by ASSIST technical staff. Instruments were field tested in El Salvador and Honduras. Instruments are being adapted by each country team in conjunction with the Ministry of Health. ASSIST Chiefs of Party began recruiting data collectors. Baseline data collection is scheduled for FY2017 Q1.

Activity 3. Strengthen Zika-related knowledge and skills among health workers

OVERVIEW

ASSIST plans to develop a training course and other educational materials on Zika-related knowledge and skills for family planning and antenatal care health workers. The project also intends to strengthen health workers' capacity by developing knowledge management mechanisms and a community of practice to facilitate sharing learning and information among teams and countries.

KEY ACCOMPLISHMENTS AND RESULTS

- **Counseling guide for FP & ANC health workers at secondary and tertiary care facilities on the topics of family planning, prenatal care, and postpartum care in the context of the Zika Virus was developed by ASSIST technical staff, under the leadership of Elena Hurtado and Melida Chaguaceda (Q4).** The content of the guide was reviewed by USAID technical teams and USAID-partner organizations, and is being adapted by Ministries of Health in project countries. Through partnership with MCSP, counseling guide will be disseminated further beyond project countries.
- **Modules for the training course for Zika-related knowledge and skills for FP and ANC workers are currently in development (Q4).** Content from the Counseling Guide is being adapted for training course. The American Congress of Obstetricians and Gynecologists and American Academy of Pediatrics were subcontracted to identify and contract country-level tutors for online component of training course.

Activity 4. Support Zika-related evidence-based practice

OVERVIEW

In close coordination with MSCP, ASSIST will identify existing and develop new job aids for health care providers, such as brochures and pocket cards and make these available through regional and national dissemination channels, including ASSIST's Spanish-language maternal and child health web portal, *Salud Materno Infantil*.

KEY ACCOMPLISHMENTS AND RESULTS

- **A sub-site on Zika was developed within the existing knowledge management website www.maternoinfantil.org (Q4).** More than 130 technical documents related to Zika, with special emphasis on WHO, PAHO, CDC technical documents, have been posted and are available for consultation by country-based health workers.

Activity 5. Start organizing a continuous quality improvement system for Zika

OVERVIEW

The goal of this activity is to establish QI teams at participating facilities in each country and support facility-based Zika QI teams to conduct a baseline for compliance with Zika standards of care, producing quantitative indicators to highlight areas in need of improvement by facility. ASSIST is also developing an online course on QI methods and techniques adapted to Zika activities.

KEY ACCOMPLISHMENTS AND RESULTS

- **ASSIST country teams determined prioritized departments/provinces, municipalities, and health facilities in conjunction with Ministries of Health and Social Security Agencies where quality improvement teams will be established (Q4).**

Activity 6. Organize and hold an international meeting with participation of QI teams' delegates and partners from the four countries, to share updated technical information, experiences, difficulties, and to draft a work plan for FY17

OVERVIEW

ASSIST will organize an international meeting of the four countries with delegates from QI teams, MOH, USAID Missions, PAHO, UNICEF, ASSIST, and other country Zika partners in FY17.

KEY ACCOMPLISHMENTS AND RESULTS

- **Planning for an international meeting was postponed until FY17 Q1.**

IMPROVEMENT IN KEY INDICATORS

- **ASSIST developed a total of 19 project indicators, including outcome indicators, process indicators, and input indicators, for the FY2017 work plan.** The baseline assessment will be done Q1 FY17. Key indicators include:
 - Percent of demand satisfied with modern contraception among women of reproductive age in sites supported with USAID Zika fund (CDC Dashboard indicator)
 - Number of antenatal care (ANC)/family planning (FP) providers in sites supported with USAID Zika funds who have access to guidelines or protocols for Zika prevention, counseling and screening for pregnant women during routine ANC (CDC Dashboard Indicator)
 - Number of providers in health facilities who have received training on Zika prevention, counseling and screening supported with USAID Zika funds (Cross project USAID indicator)
 - Proportion of ANC/FP sites supported with USAID Zika funds that have at least two providers trained on Zika prevention, counseling and screening for pregnant women (Cross project USAID indicator)
 - Number of provider-oriented materials for Zika prevention, counseling and screening adapted or produced with USAID Zika funds (Cross project USAID indicator)
 - Number of provider-oriented materials for care and support of Zika-affected children adapted or produced with USAID Zika funds (Cross project USAID indicator)
 - Number of client-oriented information, education or communication resources for Zika prevention, counseling and screening adapted or produced with USAID Zika funds (Cross project USAID indicator)

GENDER INTEGRATION

ASSIST partner WI-HER, LLC is providing technical assistance to incorporate a gender approach into Zika activities throughout countries. An initial discussion identified potential areas that are frequently improved through a gender approach and resulted in a stronger version of our Zika FY17 work plan.

SUSTAINABILITY AND INSTITUTIONALIZATION

ASSIST is working from the start in very close coordination with corresponding departments/divisions of Ministries of Health and Social Security Institutions, such as the Epidemiology, Reproductive Health, Family Planning, and Education departments. Our tools are extensively discussed and adapted working together with these teams at national institutions. We believe this approach will facilitate the incorporation of ASSIST's methods and tools into the regular activities and approaches of the local institutions beyond the period when the project is active.

Middle East Regional Bureau

MIDDLE EAST REGION

BACKGROUND

The main causes of morbidity and mortality in the Middle East (ME) have dramatically shifted over the last two decades. Similar to the North American, European, and Eurasia regions, countries in the Middle East have succeeded in reducing the disease burden for many communicable and non-communicable diseases (NCDs), as well as newborn, nutrition, and maternal conditions. However, while deaths from congenital anomalies, preterm birth complications, and diarrheal disease decreased by 36%, 23%, and 69%, respectively, the prevalence of ischemic heart disease, stroke, major depressive disorders, and diabetes increased by 44%, 35%, 58%, and 87%, respectively, in the last two decades.⁶

Communicable diseases in the region, many of which had previously been under control or eliminated (including measles and polio) are beginning to re-emerge.⁷ Increased NCD prevalence, the Syrian

⁶ [Global Burden of Diseases, Injuries, and Risk Factors Study 2010](#) (GBD 2010)

⁷ Jordan Country Development Cooperation Strategy 2013-2017, USAID

refugee crisis, and the re-emergence of communicable diseases are driving up health care costs (including costs of pharmaceuticals, which represent about one third of total health expenditures), significantly straining health systems in the region and threatening to negatively impact the economy as the population continues to grow and the health situation continues to deteriorate.

To respond to the above-mentioned needs, the USAID Bureau for the Middle East asked the USAID ASSIST Project to strengthen the capacity of health systems to respond to emerging public health threats in the Middle East through improving prevention, screening, and care practices for clinical conditions contributing to the highest disease burden and premature mortality in the region.

PROGRAM OVERVIEW

What are we trying to accomplish?	At what scale?
1. Identify priority areas for improvement	
<ul style="list-style-type: none"> Rapidly assess prevention, screening and care best practices of clinical conditions contributing to the highest disease burden and premature mortality 	<ul style="list-style-type: none"> Middle East: Regional Focus countries have not been finalized yet. Jordan: National and facility levels (from available secondary data)
2. Enhance regional partnership and actions to respond to health system challenges (NCDs and Refugee health) in the Middle East	
<ul style="list-style-type: none"> Conduct a regional workshop with a focus on improvement as a tool to respond to health system challenges (NCDs and Refugee health) in the Middle East. 	<ul style="list-style-type: none"> Middle East: Regional
3. Reduce hospital acquired infections in the West Bank	
<ul style="list-style-type: none"> Reduce hospital acquired infections 	<ul style="list-style-type: none"> West Bank/Palestine
<input type="checkbox"/> Improvement Activity	<input type="checkbox"/> Cross-cutting Activity

Activity 1. Identify priority areas for improvement

OVERVIEW

ASSIST conducted a rapid assessment of prevention, screening, and care best practices of clinical conditions contributing to the highest disease burden and premature mortality in two countries: Jordan and West Bank/Gaza. This was done in close collaboration with the USAID Middle East Bureau and field missions, national government Ministries of Health (MOH), and the WHO Regional Office for the Eastern Mediterranean (EMRO). ASSIST engaged key stakeholders to identify priority areas for improvement.

KEY ACCOMPLISHMENTS AND RESULTS

- Conducted calls and in-person meetings with representatives of USAID Bureau for the Middle East (Amy Kay), USAID Office of Health Systems (James Heiby, Rhea Bright, Adam Slote), and USAID field missions in Jordan and West Bank/Gaza (including Anna McCrerey, Naghah Abu Shaqra, and Sherry Kamin) to discuss the scope of the intervention (Nov 2015).**
- Conducted and shared a desk review of available secondary data to identify priority areas for improvement and the scope of the project (Dec 2015 – Jan 2016), i.e. regional and country-level data on the major clinical conditions contributing to the highest disease burden and premature mortality, specific target groups that are particularly vulnerable, and the impact of these conditions on maternal and child mortality and adolescent health. Upon request of the USAID Mission in Jordan, the desk review also included an assessment of main enabling factors and challenges associated with national responses to reduce high-burden diseases, a rationale for investing in improved quality of prevention, early detection, and management of these diseases, and possible priority clinical focus areas for this USAID ASSIST Middle East Bureau-**

funded activity. The desk review and accompanying slides were sent to USAID representatives from the Office of Health Systems, Middle East Bureau, and the Mission in Jordan.

- **Presented on the USAID HCI and ASSIST Project experiences to improve NCD prevention and management and the potential application of this experience for this activity** (Mar 2016). Victor Boguslavsky and Tamar Chitashvili presented to the USAID Regional Bureau for the Middle East to support planning of this activity.
- **Discussed possible programming with WHO Regional Office for the Eastern Mediterranean (EMRO) and WHO Service Delivery and Safety (SDS) department together with colleagues from USAID MEB and USAID HSS** (Mar – June 2016). Together with USAID ME Bureau team, we discussed possible programming with WHO EMRO representatives Slim Slama, Asmus Hammerich, and Mondher Letaief. To support a coordinated effort, WHO EMRO colleagues outlined priority areas and activities in the Eastern Mediterranean region regarding NCDs. Specifically, WHO EMRO is addressing health systems strengthening, quality and safety, and NCD management to enhance regional NCD response. The key focus areas for WHO EMRO include: 1) NCD governance, 2) prevention and reduction of risk factors, 3) NCD surveillance and monitoring and evaluation (M&E), and 4) improving NCD prevention, early detection, and management. M&E/NCD Surveillance and Research was identified as one of the potential areas of collaboration with WHO EMRO.

Activity 2. Enhance regional partnership and actions to respond to health system challenges (NCDs and Refugee health) in the Middle East

OVERVIEW

ASSIST is working with various USAID and UN partners on technical and organizational details of a regional workshop with a focus on improvement as a tool to build partnerships, develop actionable steps, and respond to the health system challenges of NCDs and the refugee crisis in the Middle East.

KEY ACCOMPLISHMENTS AND RESULTS

- **Discussed plans and coordination with USAID ME Bureau and OHS, WHO Regional Office for the Eastern Mediterranean (EMRO) and WHO Service Delivery and Safety Department** (July – Sept 2016). To build partnership and develop actionable steps of addressing common health system challenges in the Middle East, the USAID Middle East Bureau decided to conduct a regional workshop with a focus on improvement as a tool to respond to health system challenges (NCDs and Refugee Health) in the Middle East (Aug 2016). ASSIST, in partnership with the WHO Service Delivery and Safety Department, WHO Department of Management of NCD, Disability, Violence and Injury Prevention, WHO EMRO, and UNDP Regional Bureau for Arab States, agreed to develop a concept note for the regional conference and share it with relevant structures of WHO and UNDP for review and feedback.

Activity 3. Reduce hospital acquired infections in West Bank

OVERVIEW

In addition to regional-level support, USAID West Bank/Gaza, with funding from USAID Middle East Bureau, has requested ASSIST to engage with Augusta Victoria Hospital and the Ministry of Health in the West Bank to provide technical assistance to address hospital acquired infections. In addition to the growing burden of NCDs, of particular concern in the Palestinian Territories is the growing antibiotic resistance and the related lack of standardized infection prevention and control measures.

This activity is in its start-up phase. ASSIST will build on hospital-wide standards and treatment protocols developed with support of USAID/West Bank/Gaza and will engage with USAID Middle East Bureau, USAID West Bank/Gaza, Augusta Victoria Hospital, the Ministry of Health, relevant hospitals, and other stakeholders to launch a national level collaborative with the aim of developing a national standardization and surveillance system within the Ministry of Health and replicating the work done in Augusta Victoria in other hospitals in the health sector. The overall goal of the improvement collaborative is develop a standardized system for decreasing hospital-acquired infections and associated morbidity and mortality.

KEY ACCOMPLISHMENTS AND RESULTS

- **USAID/West Bank/Gaza field office expressed interest in addressing high rates of referral (including unjustified referrals) at the hospital level** (June 2016). Continued discussion of the scope of the activity with representatives of USAID Bureau for the Middle East Amy Kay and Lynn Adrian.
- **Developed a concept note for a national level collaborative** with the aim of developing a national standardization and surveillance system within the Ministry of Health and replicating the work done in Augusta Victoria in other hospitals (Sept 2016). This is to ensure having a uniform, standardized system to decrease hospital-acquired infections and associated morbidity and mortality. ASSIST will provide expert technical assistance with the objective of decreasing the high burden of hospital-acquired infections in patients referred from MOH hospitals, through 4-5 in-country visits as well as remotely.

GENDER INTEGRATION

NCD disease burden and risk factors were analyzed sex- and age-disaggregated to identify priority areas for improvement. Vulnerable populations were identified (especially, women of reproductive age and refugees), and such vulnerabilities will be considered in improvement activities.

As part of the ASSIST QI approach, gender will be integrated throughout Activity 4 as needed. Hospital-acquired infections data will be collected and analyzed by sex and other relevant demographics to identify gaps in care and target improvement activities to close any identified gaps. In addition, gender will be integrated into the national standardization and surveillance system as relevant.

MNCH-Directed Funding

MATERNAL, NEWBORN, AND CHILD HEALTH

BACKGROUND

The USAID ASSIST Project's maternal, newborn, and child health (MNCH) direct-funded activities build the capacity of governments and partners to adapt improvement approaches to continuously strengthen essential system functions to improve, scale up, and sustain high-impact, evidence-based health care for the leading causes of maternal, newborn, and child mortality in USAID priority countries. All ASSIST MNCH activities are in support of USAID's goal of Ending Preventable Child and Maternal Deaths (EPCMD) by 2035. ASSIST MNCH activities seek to incorporate best practices along all points of antenatal, intrapartum, postpartum, postnatal, and early childhood care from the household to hospital continuum. Among others, MNCH direct-funded activities will contribute to the following objectives:

- Build government and partner capacity to apply improvement approaches across health system levels (community, clinic, hospital, district management team, and central/regional MOH) to improve, scale up, and sustain high-impact people-centered MNCH services for leading causes of morbidity and mortality in USAID MNCH priority countries.
- Test innovative applications of improvement approaches to address cutting-edge areas in maternal, newborn, and child health. These include: integrating MNCH routine and complications care across system levels; strengthening local information systems to track sentinel quality measures; and building provider/manager competencies to support improvement work in local systems.
- Strengthen health worker and manager skills, motivation, and performance through integrated clinical and quality improvement capacity building and engagement in ongoing improvement work.
- Develop, test, and disseminate technical frameworks, approaches, and tools that can increase effectiveness of improvement and health system strengthening initiatives in support of the USAID EPCMD strategy.

- Support development and testing of MNCH quality of care indicators and measurement to strengthen routine health information systems, permit regular tracking of quality measures at service delivery level, and promote accountability at global, national, and sub-national levels.

PROGRAM OVERVIEW

What are we trying to accomplish?	At what scale?
1. Improve primary care ANC delivery and the quality of integrated care for pre-eclampsia/eclampsia	
<ul style="list-style-type: none"> • In a “slice” of the health care system, improve quality of primary care ANC services including best practices and antenatal prevention, detection and management of obstetric complications and maternal morbidities, with emphasis on pre-eclampsia and eclampsia along a primary and referral continuum of care 	Facilities in Jinja District, Uganda: <ul style="list-style-type: none"> • 10 health centers III • 5 health centers IV • 2 general district hospitals • 1 regional referral hospital (Half of these facilities will be assigned to implement quality improvement intervention while the rest will act as controls). The regional referral hospital will be in the intervention group.
2. Survive and Thrive (S&T) Initiatives	
<ul style="list-style-type: none"> • Improve newborn outcomes by building integrated clinical and QI competencies of providers, managers and professional associations to continuously improve Helping Babies Survive and Helping Mothers Survive best practices for mothers and newborns • Work with the American Academy of Pediatrics (AAP) to develop, test, and support use of a QI workbook and QI materials to build skills of health care workers in low-resource settings. • Lead a QI TWG for the multi-partner S&T Global Development Alliance (GDA) to contribute to improved newborn and maternal outcomes by supporting to build integrated clinical and QI competencies of providers, managers and professional associations 	<ul style="list-style-type: none"> • USAID priority countries
3. Support regional and global initiatives to improve newborn care in priority countries	
<ul style="list-style-type: none"> • Improve newborn outcomes by supporting survive and thrive (S&T) Global Development Alliance (GDA) partners to build integrated clinical and QI competencies of providers, managers and professional associations to continuously improve Helping Mothers Survive (HMS) and Helping Babies Survive (HBS) best practices in USAID priority countries • Support technical design and implementation of the WHO Quality of Care (QoC) Strategy for Maternal and Newborn Health at global, regional and country levels • Contribute to global learning on quality gaps and newborn care improvement best practices in EPCMD countries by participating in global dialogue, sharing lessons learned and results achieved within global alliances and technical working groups (e.g., S&T GDA and UNCoLSC Newborn Resuscitation TWG) 	<ul style="list-style-type: none"> • USAID priority countries • Global technical leadership

What are we trying to accomplish?	At what scale?
4. Improve and sustain high-quality newborn resuscitation services through assessing quality of service delivery	
<ul style="list-style-type: none"> As part of the Resuscitation Working Group of the Newborn Technical Resource Team, contribute to the development of guidelines and tools to assist countries in improving the coverage and quality of resuscitation services at scale Assess the quality of basic resuscitation services in Uganda and inform a broader strategy to improve the quality of basic newborn resuscitation services at scale 	<ul style="list-style-type: none"> Global 26 facilities in Northern Uganda
5. Improve quality of treatment of childhood illnesses	
<ul style="list-style-type: none"> Improve the Integrated Management of Childhood Illness (IMNCI) for children at outpatient settings in a demonstration sample of facilities focusing on care for pneumonia, diarrhea, and newborn infection/sepsis early recognition, management, and referral 	<ul style="list-style-type: none"> Outpatient care of 10 facilities at Gulu and Nwoya districts of North Uganda with 1,971,822 catchment population: 3 health centers II; 3 health centers III; 2 HCIV; 1 General Hospital (outpatient); 1 Regional Referral Hospital (outpatient)

Improvement Activity
 Cross-cutting Activity

Activity 1. Improve primary care ANC delivery and the quality of integrated care for pre-eclampsia/eclampsia

OVERVIEW

ANC: ASSIST has gained significant experience in improving the quality of ANC services during its current work, as well as through its predecessor HCI. Despite these many gains, there is a strong need to accelerate and disseminate learnings about effective approaches for improving and sustaining ANC services in LMICs tailored to local disease burdens for improved prevention and management of maternal morbidities and obstetric complications, as well as to improve integrated ANC vs. a “single disease”-specific QI interventions.

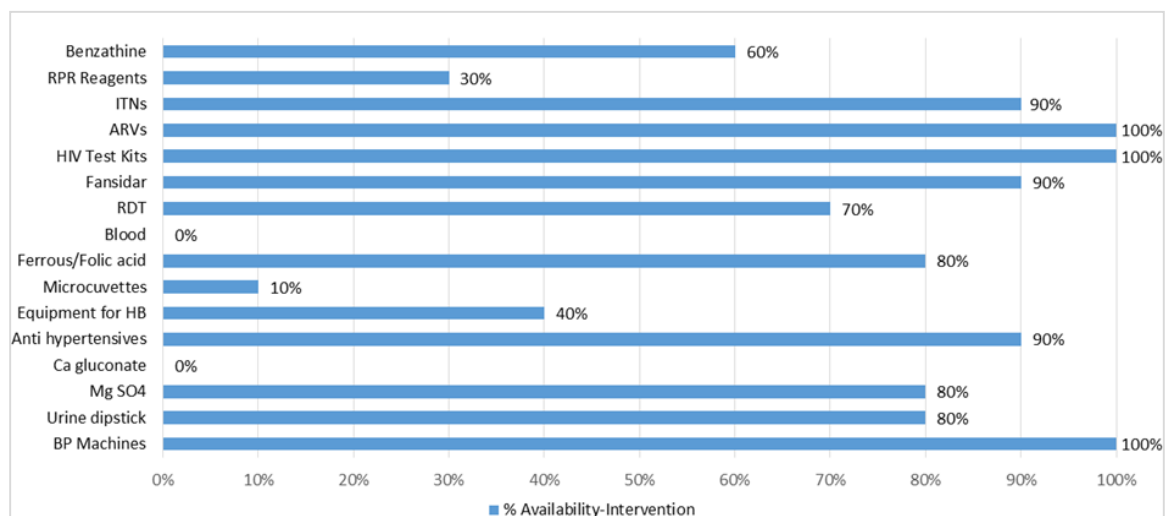
PE/E: Pre-eclampsia and eclampsia (PE/E) are major maternal death causes that require integrated care from screening and diagnosis during antenatal and delivery care, through initial management with a loading dose of MgSO₄ and appropriate referral, to correct management at hospital level for severe PE/E. While major progress has been made in refining and demonstrating the efficacy of high-impact intervention bundles for PE/E (MgSO₄), significant barriers remain around the effective integration and implementation of these intervention bundles along a continuum of antenatal, intra- and post-partum care and primary to referral level services. In particular, early recognition of complications at household and primary care levels and effective referral and counter-referral continue to represent major challenges for improving outcomes for mothers with PE/E and their term and premature neonates.

ASSIST and other partners have started to build substantive experience in improving early detection and case management of PE/E, in several USAID MNCH-priority countries, including Mali, Afghanistan, Niger and the Latin American and Caribbean region and with improving care of pre-term birth in Uganda and the Latin America and Caribbean (LAC) region.

KEY ACCOMPLISHMENTS AND RESULTS

- A baseline assessment of the quality of antenatal care was completed in intervention and control facilities in Jinja District, Uganda (Figure 109)** (Q1-Q2). Indicators related to inputs, processes and outcomes were measured.

Figure 109. Uganda: Availability of essential inputs, 9 intervention facilities, Jinja District (Sept 2015)



- **Nine QI teams were formed in each of an equal number of facilities**, including health centers III and IV and district and regional referral hospitals (Q1).
- **Three rounds of coaching were completed by three regional coaches**, with the objective of strengthening the integration of QI teams (Q1-Q2). **A second round of coaching (ANC and PE/E) was carried out in December 2015, and a third round in February 2016 to follow-up and support QI teams in their initial improvement work.**
- **The “longitudinal ANC register” was introduced in the nine intervention facilities (Q1).** This is a new ANC register produced by the Uganda MOH, which allows one to easily follow data from a mother through her consecutive ANC visits.
- **The first learning session of the improvement collaborative was held with 40 participants, mostly midwives, nurses and lab technicians (Dec 2015). A refresher course on ANC was offered, as well as knowledge and skills building on basic QI methods and tools.** At the end of the learning session, **QI teams developed specific action plans** for implementing initial Plan-Do-Study-Act (PDSA) cycles, including setting improvement aims, selecting indicators and change ideas, and implementation programming.
- **A QI team was formed at the maternity ward of the Jinja Regional Referral Hospital in March 2016.** Improvements in the percentage of women whose blood pressure (BP) was measured (**Figure 110**) with a BP machine and women with a BP higher than 140/90 who were assessed for protein in urine (**Figure 111**) began to be seen after the baseline assessment and more markedly after the first learning session, focused on improving pre-eclampsia screening, diagnosis and treatment. Initial achievements were strengthened in Q3 and sustained in Q4 (June-Aug 2016), when taking blood pressure and testing for protein in urine increased to 98% and 88% respectively.

Figure 110. Uganda: Percentage of mothers whose blood pressure was assessed during intervention in facilities, 10 facilities, Jinja District (March 2015 - Aug 2016)

- Tested specific changes:**
- ✓ One-day clinical skills training
 - ✓ Sharing dipsticks among facilities
 - ✓ Cutting dipsticks longitudinally
 - ✓ Coordination between midwives and lab technicians
 - ✓ Reorganizing processes assigning responsibilities
 - ✓ Using TB sputum recipients for urine samples
 - ✓ Using empty medicine flasks for urine samples

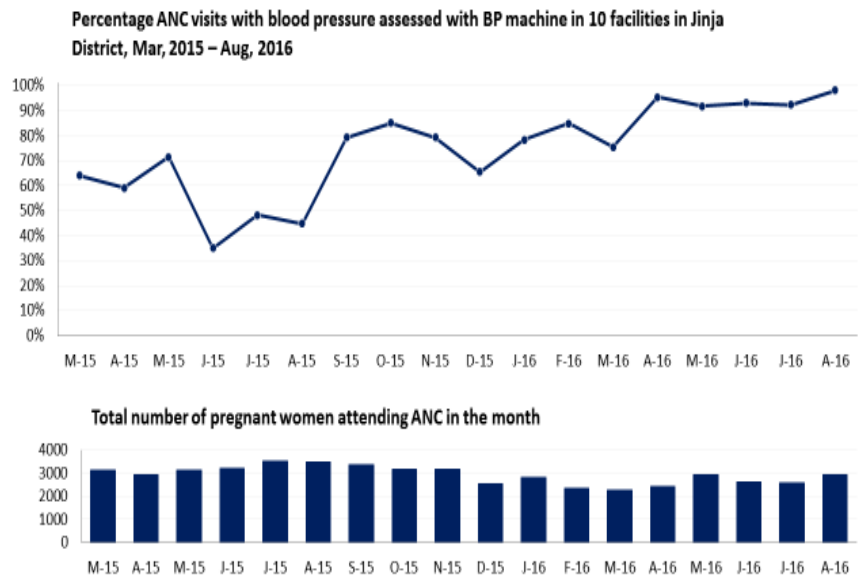
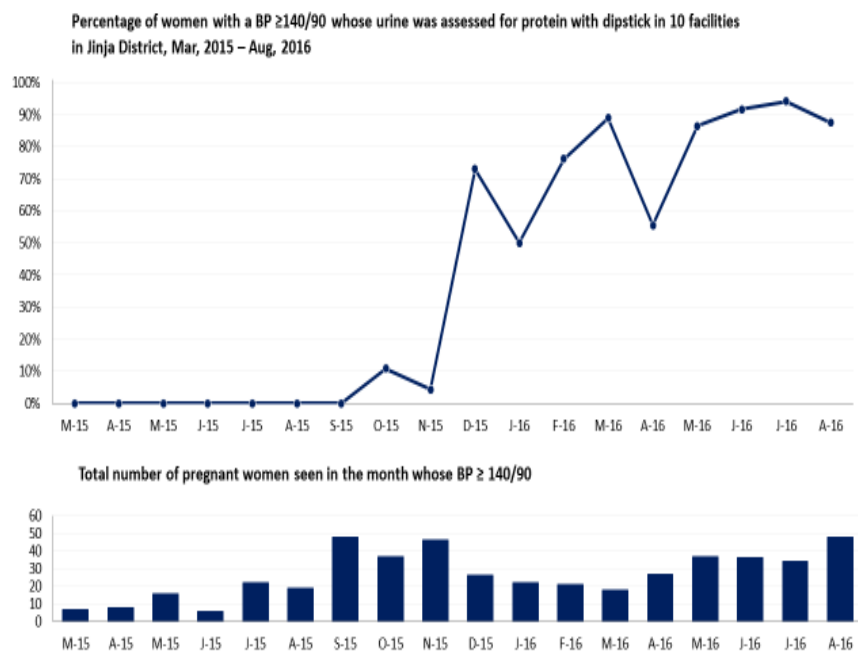


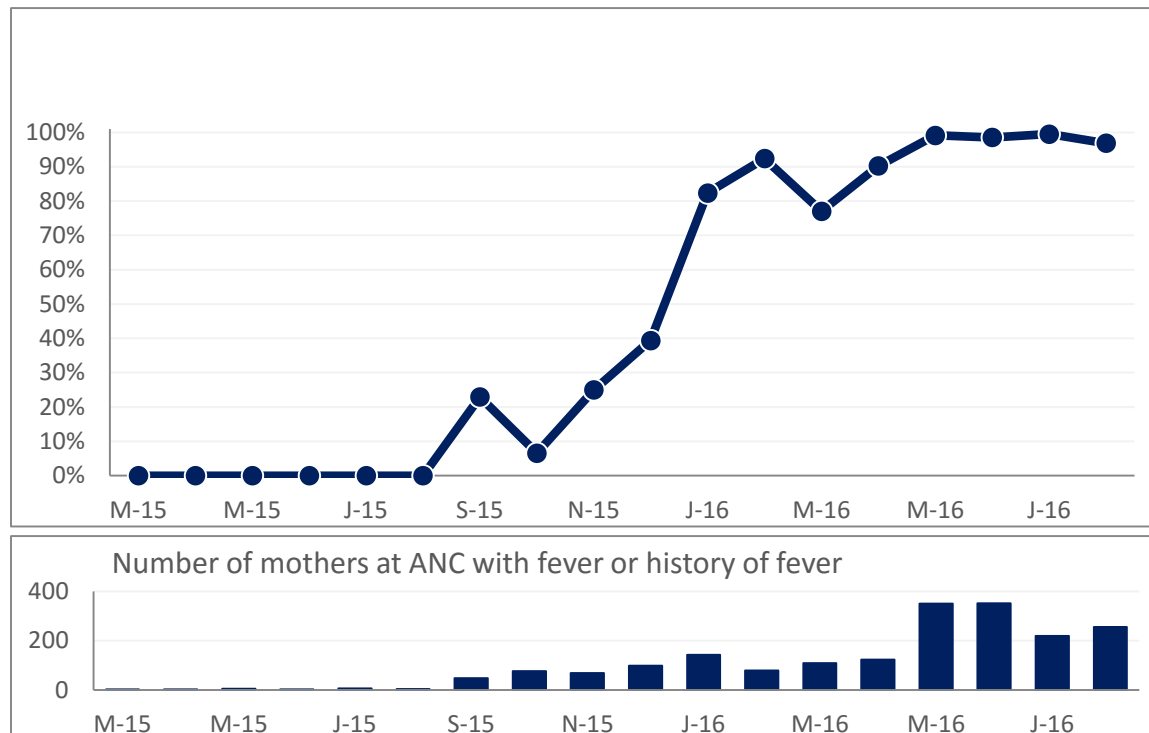
Figure 111. Uganda: Pregnant women with BP higher than 140/90 assessed for protein in urine with dipstick, 10 facilities, Jinja District (March 2015 – Aug 2016)

- Generic “invisible” changes:**
- ✓ District Management Team staff visiting coaches
 - ✓ QI teams monitoring indicators under supervision
 - ✓ Meetings to discuss indicators that do not improve
 - ✓ Implicit accountability to District Mgmt Team
 - ✓ District Health Officer addressed QI teams in person
 - ✓ ASSIST staff coach and supervises
 - ✓ QI teams invited to 3-day Learning Sessions
 - ✓ QI teams present their work and are recognized



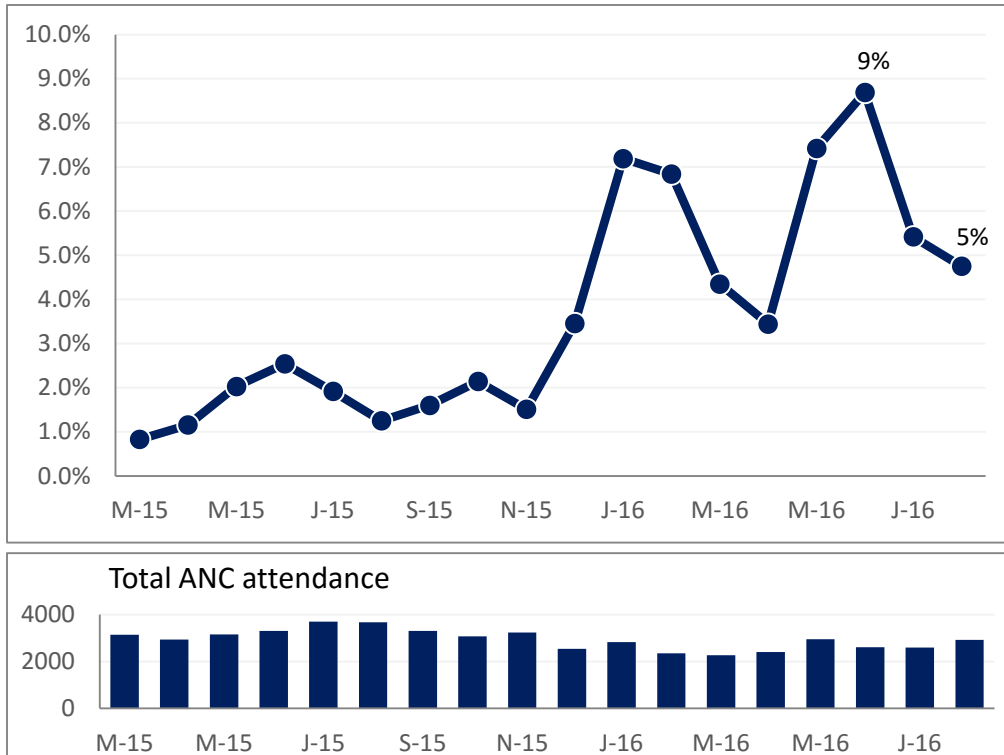
- **Improvements made in pre-eclampsia treatment led to a reduction in the case fatality rate due to severe pre-eclampsia**, from a peak of 25% in August 2015 to less than 10% in 2016, with January, March, April, and July without deaths.
- As of the end of Q3, **screening for syphilis with a rapid test at the 1st ANC session had improved significantly** from 33% in February 2016 to more than 80% by June 2016, and cases diagnosed have doubled. The percentage of syphilis cases treated as per MOH guidelines is currently at 100%.
- **As a result of the focus on improving care for malaria and syphilis during Q4, a continued increase in the screening for malaria among mothers who present with fever or a history of fever during the antenatal care session was achieved (Figure 112).** The percentage of these mothers who had a malaria test done across the ten facilities being intervened was maintained at a high level of 97-100% for the last four months.

Figure 112. Uganda: Percentage of mothers at ANC with fever or history of fever who had a malaria test done, 10 facilities, Jinja District (March 2015- Aug 2016)



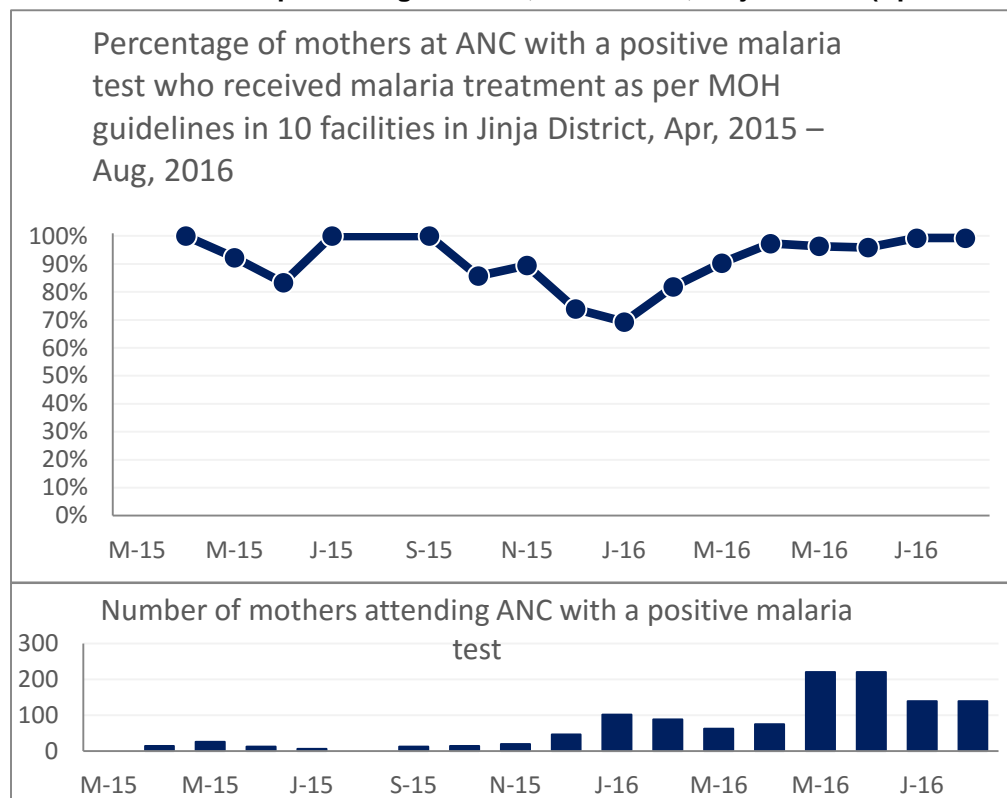
- **In Q3 and Q4 the sustained high level of screening for malaria among mothers with fever or history of fever has resulted in an important increase in malaria cases diagnosed as shown in Figure 113.** In spite of this recent decrease, the magnitude of cases diagnosed with malaria is consistently higher when compared with the initial values before the start of the improvement efforts, which fluctuated around 2-3%.

Figure 113. Uganda: Percentage of cases of malaria diagnosed and treated among all ANC visits, 10 facilities, Jinja District (March 2015 – Aug 2016)



- **Figure 114** shows that the percentage of mothers with a positive test for malaria who received correct treatment has maintained high levels of near 100% compliance since March 2016, suggesting a sustained level of improvement.

Figure 114. Uganda: Percentage of mothers at ANC with a positive malaria test who received malaria treatment as per MOH guidelines, 10 facilities, Jinja District (April 2015 – Aug 2016)



Activity 2. Survive & Thrive

OVERVIEW

Building on the success of Helping Babies Breathe, the Survive & Thrive private-public GDA was recently created, with USAID as a principal partner. The purpose of the S&T GDA is to improve provider competencies, professional associations' capacity, and quality of newborn health services for leading causes of newborn mortality in support of Every Newborn Action Plan goals. S&T GDA partners include the American Congress of Obstetricians and Gynecologists, American College of Nurse Midwives (ACNM), American Academy of Pediatrics (AAP), Jhpiego, Maternal and Child Survival Program (MCSP), ASSIST, and others. S&T GDA members are currently developing or completing Helping Babies Survive (HBS) and Helping Mothers Survive clinical modules. The GDA partners will support building clinical capacity of care providers in many developing countries. But there is growing recognition based on recent research and cumulative HBB training experience, that clinical training, while essential, is insufficient for improving and sustaining life-saving newborn health care service in low-resource settings in the absence of broader systems strengthening and quality improvement efforts. Critical systems and quality gaps impeding sustained delivery of high-impact newborn services include: poor maintenance of provider clinical competencies; unavailability of essential commodities at the bedside; inefficient organization of health care processes; lack of tracking or use of quality measures as part of routine information systems to drive improvement work; and lack of QI capacity of managers and providers to support ongoing improvement work.

KEY ACCOMPLISHMENTS AND RESULTS

- **ASSIST and AAP followed up with local institutions (e.g., AMOS, QI coach in EI Ayote/Santo Domingo) to document the progress of QI training and any follow-on QI implementation after pilot testing of the QI workbook in Nicaragua (Q1-Q2).**

- **Reported on the results of ASSIST field activities directed to improve newborn care in Mali, Kenya, and India for the period of Jan - Sept 2015 according to S&T GDA partner reporting template** (Nov 2015).
- **ASSIST organized and facilitated two QI TWG meetings** (Oct 26, 2015 and Feb 10, 2016) as well as several small group calls and discussions to facilitate the development and implementation of the QI workbook.
- **Authors continued intensive work to finalize the QI workbook and practice exercises for the workshop organized by WHO South East Asia Regional Office (SEARO) (Q3).**
- **To support implementation of WHO QoC Framework to improve care of mothers and babies at a time of childbirth** and its specific recommendations on Kangaroo Mother Care and Preterm Birth, a group of partners have come together to draft three joint statements. The USAID MNH team in the Office of Health, Infectious Diseases and Nutrition leads this effort and has offered these statements to the international and US professional associations so that they can own, endorse, and promote them among their members worldwide. ASSIST has contributed to this effort by drafting the Joint Statement on “Improving Quality of Maternal and Newborn Care in Low- and Middle-Income Countries, A Commitment to Action from Professional Health Associations” (May 2016) and coordinating/facilitating its revision by various international and US professional associations and implementing partners.

In support of WHO global quality of care (QoC) framework around the childbirth, WHO-SEARO has launched their regional QoC framework and would like to roll that out in support of countries. As the first step, WHO organized the regional workshop to introduce the QoC framework, share country experiences on improving ‘quality’, orient people on basic QI methods and identify some actions to improve ‘quality’ at the national level. The four-day regional workshop held in New Delhi in May 2016 brought together about 120 representatives from all WHO SEARO countries (except North Korea), and participants from USAID, UNICEF, WHO, regional and field teams, Save the Children, Jhpiego, and JICA. ASSIST served as a technical resource for the WHO SEARO regional QI workshop and AAP representatives, in collaboration with ASSIST team, presented the QI workbook and practice exercises (Q1-Q2).

Activity 3. Support regional and global initiatives to improve newborn care in priority countries

OVERVIEW

In FY15 the Maternal and Child Health (MCH) element of USAID asked ASSIST to create and lead an S&T GDA QI Technical Working Group to support and align S&T partners’ efforts to improve the quality of maternal and newborn health care through support, development, and implementation of a QI workbook that would serve as a guide for care providers, managers, and quality improvement teams to improve care of mothers and babies. Major progress was made in FY16 to develop and pilot test the QI workbook and supplemental practice exercises (continuation of Activity 2 above). In FY17, the ASSIST team, in close collaboration with AAP, ACNM and other representatives of S&T GDA partners, will continue working on finalization of the workbook. The workbook, that provides a step-by-step guide to care providers and improvement teams to plan, test, implement, continuously assess and refine interventions to improve care of mothers and newborns, can serve as a stand-alone tool, as well as be used as a supplemental material for HBS and HMS clinical modules to build integrated clinical and QI capacity. It is intended to be used as one of the important implementation tools within the WHO Quality of Care (QoC) initiative in the first wave priority countries.

KEY ACCOMPLISHMENTS AND RESULTS

- **Developed and shared a summary document on USAID ASSIST experiences to improve care of sick newborns and newborns at risk and participated in the first TWG meeting organized by the USAID newborn health team** (July 2016);
- **Dr. Tamar Chitashvili attended a high-level meeting at UN headquarters in New York on the partnership exchange to reach sustainable development goals** (July 2016). The purpose of the event was to share lessons learned from global and regional partnerships in a variety of sustainable development areas, from economic empowerment to sustainable energies.

- **Presented lessons learned from implementing MNCH improvement experiences in Uganda at the S&T GDA partners in-person meeting** (July 2016).
- **ASSIST team is regularly participating in technical and organizational calls to support implementation of WHO QoC Framework for Mothers, Newborns and Children** (July, August, Sept 2016).

Activity 4. Improve and sustain high-quality newborn resuscitation services through assessing quality of service delivery

OVERVIEW

Newborn resuscitation is essential in the treatment of birth asphyxia, which causes about 30% of newborn deaths. There has been an increasing investment in building the capacity of countries to provide effective coverage of quality newborn resuscitation services. Based on several discussions within the Resuscitation Working Group, as well as interest expressed by the Newborn Health Program authorities at the Uganda MOH, Uganda has been selected as a focus country to conduct an assessment of newborn resuscitation. Uganda's experience with HBB and now HBB+ has the potential to offer important learning for informing a broader strategy to improve effective coverage and quality as part the ongoing rollout of HBB+ in Uganda and across other countries as well.

To support the Ugandan Government's effort to reduce preventable newborn mortality, as part of the broader health agenda, USAID is supporting Uganda's four regions, covering 47% of the total population, through initiating and expanding the Saving Mothers Giving Life (SMGL) initiative. During its first phase, SMGL employed a package of evidence-based interventions that resulted in a 17% decrease in perinatal mortality. Building on the successful approaches of Phase 1, starting in FY14, SMGL expanded to six new districts in Uganda with an increased focus on neonatal health. Within this scope, ASSIST has been tasked with scaling up the interventions with an increased focus on newborn health (including essential newborn care, HBB, and care for preterm babies) in facilities in the west and in mid-Northern Uganda.

In an effort to inform evidence-based decisions on improved access to and use of high-quality newborn resuscitation services and to guide future improvement practices in Uganda, ASSIST will complement the ongoing assessment of coverage of HBB+ services conducted by MOH by identifying service delivery quality gaps impeding provision of effective basic resuscitation services at the facility level.

KEY ACCOMPLISHMENTS AND RESULTS

- **ASSIST regularly participated and shared feedback during the Newborn Resuscitation Working Group meetings** in order to contribute to the development of guidance and tools at the global level to assist countries in improving the coverage and quality of resuscitation services at scale (Sept 2015 – August 2016).
- **Dr. Tamar Chitashvili travelled to Uganda to advance detailed technical planning and organization of the facility-level assessment of newborn resuscitation services in Uganda** (Nov 3-17, 2015).
- **Based on the field testing results, Dr. Chitashvili developed final versions of the assessment protocol and data collection tools, adapted from the Save the Children Evaluation tools, for the newborn resuscitation assessment in Uganda.** The tools and assessment protocol were approved by the URC Institutional Review Board (IRB) in January 2016.
- **Conducted data collection in 26 medical facilities representing all levels of health service delivery system, in different districts of Uganda** (Jan-Feb 2016).
- **Dr. Chitashvili presented the results of the assessment** (June 15, 2016) at the Global Newborn Resuscitation Working Group of UN Commission of Lifesaving Commodities. The presentation was conducted together with Child Health commissioner of MoH Uganda, Dr. Jesca. The presentation discussed many gaps in newborn resuscitation and supporting system functions at the facility level and initiated a lively discussion among meeting participants.
- **Based on the feedback from USAID Global Newborn Health team and USAID ASSIST field team, finalized full technical report on the Assessment of Basic Newborn Resuscitation**

Services in Uganda. The report has been shared with relevant USAID Global and field offices and national counterparts (Sept 2016) (see <https://www.usaidassist.org/resources/assessment-quality-basic-resuscitation-services-uganda>).

- **Developed a summary report on Assessment of Basic Newborn Resuscitation Services in Uganda** (July 2016). The report, along with prepared presentation was shared at the national MNCH cluster meeting at MoH of Uganda, on July 27th, in Kampala, Uganda. Hard copies of the summary report were also distributed at the 3rd National Health Care Quality Improvement Conference (Aug 2016).
- **Selected results of the assessment of basic newborn resuscitation services in Uganda include:** Assessment of health worker knowledge and skills demonstrated that the knowledge was generally stronger than the demonstration of their skills and newborn resuscitation practices during the simulated clinical scenario (**Table 20**).

Table 20. Uganda: Results of assessment of provider knowledge, skills and practices (n=96 care providers) (Jan – Feb 2016)

Domains	Provider Knowledge	Observation in simulated clinical scenario
Preparation and start of NR	When to identify a helper and prepare an emergency plan 83% (80/96)	<ul style="list-style-type: none"> • Identifies a helper and makes an emergency plan 16% (15/96)
	Timing of clamping and cutting umbilical cord during routine care 47% (45/96)	
	When to dry baby thoroughly 63% (60/96)	<ul style="list-style-type: none"> • Dries thoroughly, removes wet cloth, covers baby with dry cloth and puts on hat 50% (48/96)
Ventilation with bag and mask	When to start ventilation with bag and mask 84% (81/96)	<ul style="list-style-type: none"> • Stimulates breathing by rubbing the back up and down along the spine 32% (31/97) • Starts ventilation within the Golden Minutes 40% (39/97) • Average time passed (after birth) before starting ventilation 74 seconds
	Indications to reapply the mask 74% (71/96)	<ul style="list-style-type: none"> • Reapplies mask and repositions head 31% (30/97) • Continues ventilation 45% (44/98)
	Indications to stop ventilation 80% (77/96)	<ul style="list-style-type: none"> • Stops ventilation, monitors baby and communicates with mother, puts baby skin to skin 40% (39/98) • Passed observation test on ventilation with bag and mask 6% (6/98)
Testing and reprocessing NR equipment	Correct way to decontaminate equipment 58% (56/96)	<ul style="list-style-type: none"> • Observed proper testing of ventilation device (average) 21% (19/91)
	Correct pre-cleaning on newborn resuscitation equipment 43% (41/96)	
	Correct steps for reprocessing the reusable bag, mask and manual suction devise 14% (13/96)	

- **Gaps in newborn resuscitation skills and supporting system functions at the facility-level had a clear implication for birth outcomes.** Looking at institutional (pre-discharge) neonatal mortality rates (13/1000 live births) and successful resuscitation practices (96%), facilities seemed to perform well, but when including fresh stillbirth as a surrogate for intrapartum stillbirth

is the denominator⁸, newborn resuscitation actions were initiated in only in 75% of live births and fresh stillbirths not breathing spontaneously or crying at birth (coverage). Notably, the total stillbirth rate was almost twice as high as the pre-discharge newborn death rate (25 per 1,000 live births) with the highest rate at the RRH (31/1,000) and the lowest in HCII & IIIs (11/1,000 live births). The rate is even higher (28/1,000) if instead of objective criteria for distinguishing stillbirth from abortion (at or after 28 weeks of gestation or ≥1000 g weight at birth) the sum of facility reported fresh and macerated stillbirth is used (Table 21).

Table 21. Uganda: Results of assessment of the quality of basic resuscitation services, 26 selected facilities (Dec 2014- Nov 2015): Registry reviews

Outcome and Impact Indicators	Total Results % (N/D)	Results by type of facility		
		HCII&III	HCIV & Hospital	RRH
Institutional neonatal mortality rate (inborn) within facility per 1,000 live births*	13 (357 / 27,318)	3 (15 / 5,098)	11 (191 / 16,700)	27 (151 / 5,520)
Stillbirth rate per 1,000 total births	28 (752 / 27,037)	12 (56 / 4,681)	31 (517 / 16,659)	31 (179 / 5,697)
Fresh stillbirth rate per 1,000 total births	16 (431 / 2,737)	5 (24 / 4,681)	19 (309 / 16,659)	17 (98 / 5,697)
% of fresh stillbirth in all reported stillbirths	58 (431 / 752)	44 (24 / 57)	60 (309 / 517)	55 (98 / 179)
Coverage with newborn resuscitation*	75 (955 / 1,268)	87 (119 / 137)	77 (643 / 830)	64 (193 / 301)
Successful resuscitation (stimulation and/or bag and mask)	96 (752 / 784)	98 (57 / 58)	95 (585 / 616)	100 (110 / 110)
% of neonatal deaths due to birth asphyxia	53 (188 / 357)	20 (3 / 15)	55 (106 / 191)	52 (79 / 151)

* ENAP core indicator

- **Results on the assessment of the quality of essential newborn care for every baby (a set of high-impact measures) revealed better compliance with evidence-based care practices and stronger supportive system functions than those on the quality of newborn resuscitation or the care of small and sick babies (Table 22).**

⁸ According to ENAP measurement guidance

Table 22. Uganda: Compliance with essential newborn care practices and supporting system functions, 26 selected facilities (Sept 2015 - Nov 2015)

ENC best practices	% Provider knowledge and attitudes (n=96)	% Facilities with essential inputs (n=26)	Compliance with best practices and care outcomes (registry review results) (n=780)
Breastfeeding within first hour	<ul style="list-style-type: none"> Breastfeeding within 1st hour as essential intervention 79% (76/96)* 	<ul style="list-style-type: none"> Having current baby-friendly certification 0% (0/25) Routinely providing alternative feeding 15% (45/26) Breast pump 4% (1/26) 	<ul style="list-style-type: none"> Newborns breast fed within 1 hour 79% (568/720)
Thermal Protection	<ul style="list-style-type: none"> Immediate skin-to-skin contact within 1 h 76% (73/96) 	<ul style="list-style-type: none"> Clean and dry towel or blanket to wrap baby 8% (2/26) 	<ul style="list-style-type: none"> Newborns with immediate skin-to-skin contact 61% (455/750)
Other ENC Components	<ul style="list-style-type: none"> Training on essential newborn care last 2 ys 34% (31/92) Regular QI in ENC 45% (43/96) Clinical supervision (coaching) in ENC 39% (37/96) 	<ul style="list-style-type: none"> Guidelines for Essential Newborn Care 12% (3/26) Chlorhexidine 0% Skin antiseptic 69% (18/26) 	<ul style="list-style-type: none"> % of newborns who received a complete package of ENC 2% (6/360) % of newborns with Vit K, eye & cord care 10% (70/660); Newborns with BCG and Polio at birth 71% (534/750)

- **Important strengths and weaknesses were also revealed in individual and institutional QI and capacities (Table 23);** According to provider survey results 50% of health workers had some type of QI activity within the facility. At the same time, there was very limited understanding of the QI principles and practice, including data generation and its use for continuous improvement.

Table 23. Uganda: Institutional QI capacity: Based on the results of survey of 96 care providers from 26 selected facilities (Jan-March 2016)

Domain	Strengths	Weaknesses
Routine QI activities	<ul style="list-style-type: none"> Planning 58% (56/96) Implementing 60% (58/96) Monitoring 57% (55/96) 	<ul style="list-style-type: none"> Refining actions based on improvement results 28% (27/96) Conducting PDSAs 22% (21/96) Can describe recent PDSA 0% (0/96) Do not know what PDSA means 27% (22/81)

Monitoring progress of QI	<ul style="list-style-type: none"> • Develops and tracks: <ul style="list-style-type: none"> ○ Process indicators 43% (41/96) ○ Outcome indicators 46% (44/96) 	<ul style="list-style-type: none"> • Does not monitor QI progress 19% (17/89) • Develops written results 28% (27/96) and written QI plans 22% (21/96) • Aggregates/disaggregates data 15% (14/96) • Compares performance with other facilities, district, national benchmarks 19% (18/96) • Identifies what was learned from QI 26% (25/96) • Refines actions 28%; develops and tracks written plan based on improvement results 22% (21/96)
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Activity 5. Improve quality of treatment of childhood illnesses

OVERVIEW

To contribute to decreasing child mortality, through the MNCH core-funded activities, ASSIST has been tasked with assessing management of childhood illness at different levels and initiate modest improvement in demonstration facilities. Clinical approaches to identify and manage diseases among children and young infants, such as WHO's Integrated Management of Newborn and Childhood Illness (IMNCI), proved to be effective and efficient, particularly in outpatient settings, for ensuring a combined treatment of the major childhood illnesses through improving case management skills of health care staff, overall health systems, and family and community health practices. IMNCI traditionally focuses on the first point of contact with the health system, the first level of trained health workers, and primary care clinics. However, growing evidence exists about the poor quality of medical services at primary health centers. The health care providers at these clinics should be able to assess children, including young infants, and arrange referrals for hospital admission for those with possible serious infections. When this is not possible, they should be able to offer alternative ambulatory treatment. WHO recommends that infants up to two-months-old with possible severe bacterial infection be treated in the hospital with two injectable antibiotics – penicillin or ampicillin plus gentamicin for at least seven days. Unfortunately, in resource-limited settings, up to 60% of babies with signs of serious bacterial infection do not receive the recommended inpatient treatment because hospitals are not accessible, acceptable, or affordable for families. To address this challenge, WHO recently released guidelines on managing possible bacterial infections in young infants in outpatient settings when referral is not possible. In order to increase access to treatment and help save lives of babies, the Ugandan Ministry of Health intends to be an early adopter of the WHO guidelines.

The activity is supporting assessment of services and modest implementation of the above-mentioned newly released evidence as part of the child health improvement intervention through a small scope improvement activity to inform future learning and scale-up. The local context creates significant opportunities to leverage the USAID child health-directed funds managed by ASSIST with concurrent efforts of the project's field-funded SMGL Phase 2 maternal and newborn health interventions in Uganda.

By focusing on IMNCI in outpatient settings, particularly at the first point of contact with the health service delivery system through strengthening diagnosis and case management skills of care providers and supporting health system functions, the activity will contribute to a decrease in premature morbidity and mortality among children and thus, contribute to the global EPCMD from pneumonia and diarrhea agenda. The activity will also support use of simplified outpatient regimens⁹ for treatment of serious infections in young infants when hospital care is not available/affordable and will contribute to improved clinical outcomes of sepsis among newborns/young infants.

⁹ Community Management of Neonatal Infections, Available at: <http://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2815%2960204-5/abstract>

KEY ACCOMPLISHMENTS AND RESULTS

- **Dr. Tamar Chitashvili visited Uganda to assess the progress and support implementation of core-funded child health improvement activity** (Nov 2015). Dr. Chitashvili had two meetings with a Child Health Consultant working on implementation of the activity in Gulu and Nwoya districts of Northern Uganda. Specifically, Dr. Chitashvili discussed the data collection for the baseline assessment of IMNCI practices in Northern Uganda and the organization and content of follow-on improvement activities.
- **Conducted detailed assessment of the quality of IMNCI services in 10 selected facilities (HCII, HCIII, HCIV, GH, RRH) in Gulu and Nwoya districts of Northern Uganda** (Oct 2015). Collected data were entered into relevant databases (Q1-Q2). Results from the assessment are presented in **Table 24**.

Table 24. Uganda: Results of medical record review and provider interviews on integrated management of young infants at outpatient settings, 10 facilities, In Gulu and Nwoya districts of Northern Uganda (July – Sept 2015)

Domain	IMNCI indicators	Medical registry review Results	Provider knowledge domains	Correct answers on knowledge questions
Severity assessment	% (n) of infant primary visits (0-59 days) for whom severity classification is recorded in the registry based on IMCI protocol	28.3% (85/300)	Signs of severe infections among young infants	19% (3/16)
Management of infection	% (n) of young infants with signs of serious infection or any of the following diagnoses (sepsis, severe pneumonia, malaria, meningitis) documented to whom evidence-based initial treatments and referrals were prescribed	47% (100/183)	Signs of critical illness among newborns	31% (5/16)
	% (n) of young infants (0-59 days) with signs of infection and/or any of the following diagnoses (sepsis, pneumonia, RTI, meningitis) treated with non- evidence-based medications	42.7% (128/300)		
	% (n) of young infants with signs of serious infection and/or relevant diagnoses in the registry (sepsis, severe pneumonia, malaria, meningitis) to whom evidence-based full outpatient treatment regimen was prescribed	1% (2/193)	Recommended treatment for an infant below 2 months with signs of severe infection whose parents cannot access, accept or afford referral or inpatient services	6% (1/16)
	% (n) of young infants with RR > 60/m as the only sign of possible infection/fast breathing pneumonia with evidence-based first line antibiotic treatment prescribed	93.3% (46/48)	Management of infant with fast breathing as the only sign of illness	81% (13/16)
Management of diarrhea/dehydration	% (n) of young infants diagnosed with diarrhea or classified as dehydration to whom ORS is prescribed/given	66.0 % (35/47)		
	% (n) of young infants 0-59 day(s) diagnosed with diarrhea or classified as dehydration to whom non-evidence-based (non-EB) medications (e.g., zinc, antibiotics) is prescribed/given	91.5% (43/47)	Management of diarrhea among young infants	0% (0/16)

Key: EB treatment Non-EB treatment

- **Baseline assessment results helped define the priority improvement focus areas and clinical content of improvement interventions.** Based on the identified gaps, ASSIST team developed three job aids based on the IMNCI protocol and newly-released evidence on management of young infants with signs of serious infection who cannot access/accept referrals to higher-level facilities (Nov-Dec 2015):
 - Assessment and classification of young infant (0-59 days) in outpatient settings
 - Assessment and classification of children between 2 months-5 years in outpatient settings
 - Management of common childhood conditions
- **ASSIST team also initiated consultations to revise the national outpatient register to capture clinical information essential for routine monitoring of the progress in improving IMNCI in Uganda** (Nov 2015).
- **ASSIST team started QI intervention in selected facilities of Northern Uganda** (Jan 2016). During the reporting period, USAID ASSIST team conducted the following activities:
 - **New QI teams formed** (Dec 2015-Jan 2016): Eight QI teams were formed over the quarter at various outpatient departments of supported facilities and more especially at HC IIs with no prior QI support from USAID ASSIST in Uganda. In these facilities there was no continuous improvement process in place. Improvement teams were formed composed with all providers involved in provision of outpatient care in selected facilities. The teams were oriented about the main principles of QI, how to identify gaps in IMNCI, and how to plan, test, implement, and evaluate changes in their health care processes to improve newborn and child health outcomes.
 - **Supported onsite QI coaching by district coaches** (Jan-March, 2016): To build the capacity of the district health offices in Northern Uganda to coordinate and improve child health work, four district coaches were mentored on IMNCI improvement by the USAID ASSIST consultant. These coaches are part of the district MOH management team and assigned by government to support local QI initiatives. They currently support routine, bi-weekly coaching of QI teams of selected facilities to improve IMNCI care and outcomes with technical support from the ASSIST child health consultant.
 - **Improved availability of essential IMNCI inputs** (Jan-Mar 2016): To address the gaps in key inputs essential to assess and classify young infants and children at outpatient ward, through coordinated efforts of ASSIST team, other implementing partners, and district health offices of Gulu and Nwoya, all 10 intervention facilities were able to resolve gaps in availability of thermometers and weight scales.
- **The routine monitoring of two months of improvement interventions show promising results (Figure 115).** Specifically, monitoring demonstrated that evidence-based prevention, diagnosis, and treatment of young infants with possible severe infections improved from the baseline measurement. Most importantly, the skills of health workers in assessing and managing sick young infants improved through monthly onsite mentorship, in-house continuing medical education and on-job training, as well as displaying simple job aids at care points (OPD and maternity). Facilities used QI to improve documentation and other processes that eventually led to accelerated improvements.
 - **Improved nutritional assessment at OPD.** Despite the fact that the prevalence of severe acute malnutrition in Northern Uganda is high, only one facility was carrying out routine nutrition assessment at OPD during the baseline. By conducting monthly QI coaching, on job training of triage teams as well as supporting care facilities to obtain necessary inputs (MUAC tapes and infant weigh scales), the OPD QI teams improved both documentation and assessment of nutritional status in their facilities. In addition, the knowledge gap on management of children with SAM was addressed by conducting onsite mentorship and CMEs as well as displaying job aids at OPD. The teams also established a referral process to the nutrition treatment centers for malnourished children.
 - **Reduced prescription of non-evidence-based antibiotics and other unnecessary medications during the management of common childhood illness.** Management of cough/cold and diarrhea using IMNCI standards and evidence based treatment regimens was identified as one of the major gap and focus of QI teams during initial phase of improvement activities. The ASSIST team supported development and distribution of job aides specific to

guide clinicians on assessment, classification and management of common newborn and childhood illnesses. These job aids were based on the up-to-date evidence-based WHO IMCI protocols and newly released WHO guidelines on management of young infants with signs of severe infections, were positioned and used at OPD to assess, consult, treat and follow up common childhood conditions. CMEs addressing rational antibiotic use were conducted by the staff. These among other change ideas contributed to a reduction in irrational use of antibiotics in children with cough and diarrhea as well as non-evidence based treatments with zinc and antibiotics among young infants (**Figure 116**).

Figure 115. Uganda: Prevention, diagnosis and treatment of young infants with possible severe infections, 10 health facilities, Nwoya and Gulu districts (July 2015 – Feb 2016)

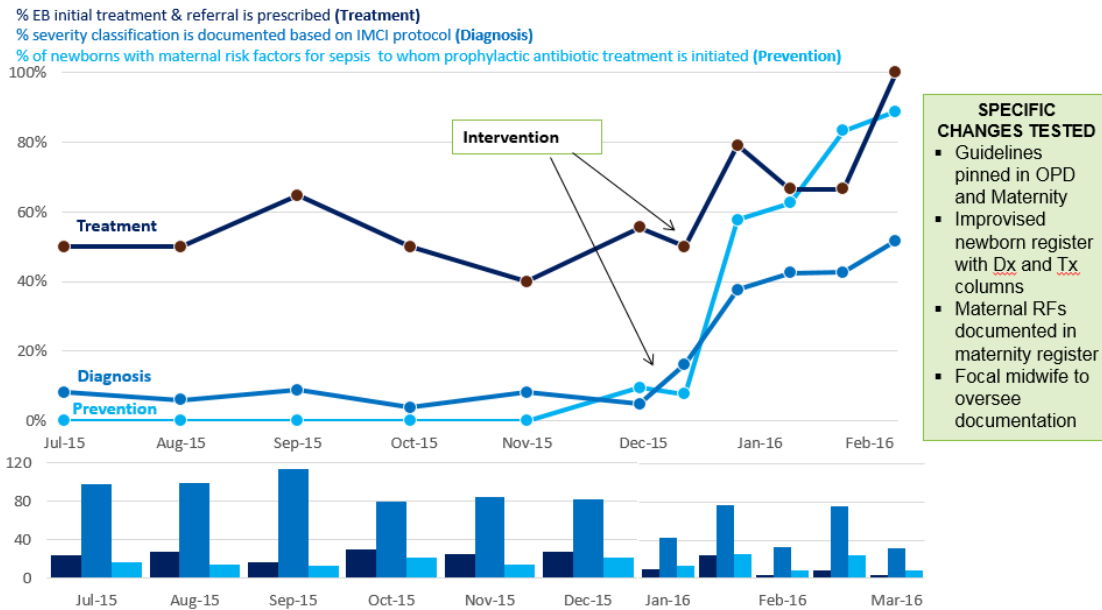
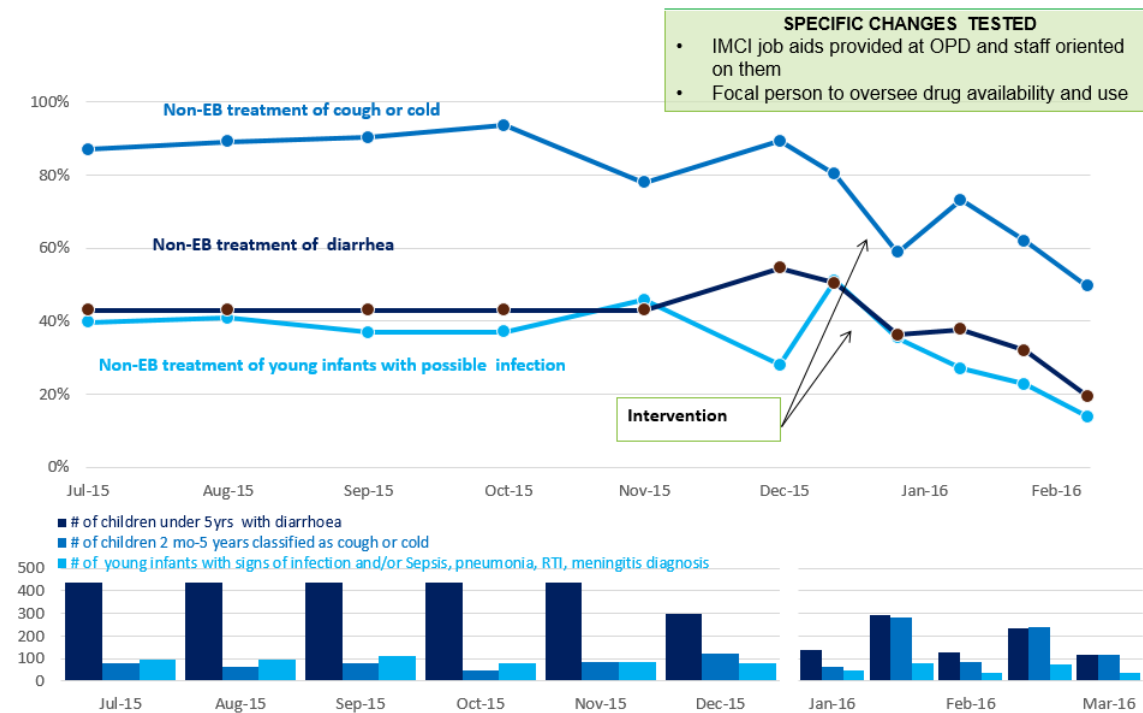


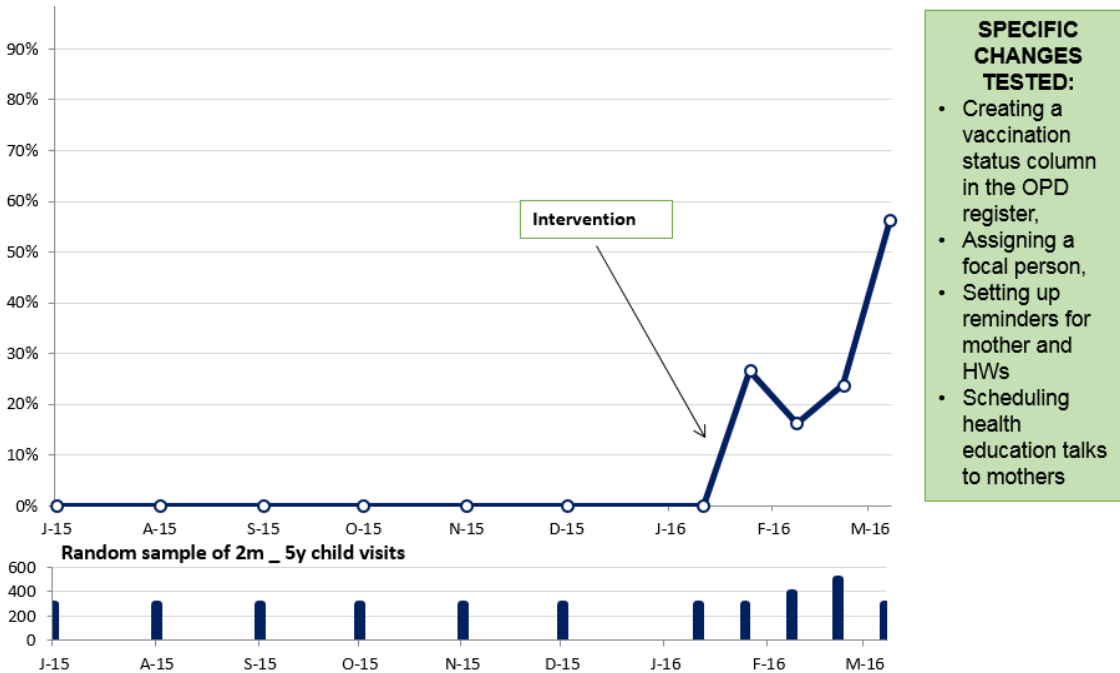
Figure 116. Uganda: Reducing irrational use of antibiotics in management of young infant infections, cough and diarrhea, 10 health facilities, Gulu and Nwoya districts (July 2015 – Feb 2016)



- Improved vaccination assessment, counseling and referral.** The baseline assessment revealed that assessment and subsequent counseling and referral for vaccination was rarely done in the under-five OPD clinics. The teams used QI initiatives by testing a number of changes like; creating a vaccination status column in the OPD register, assigning a focal person, setting up

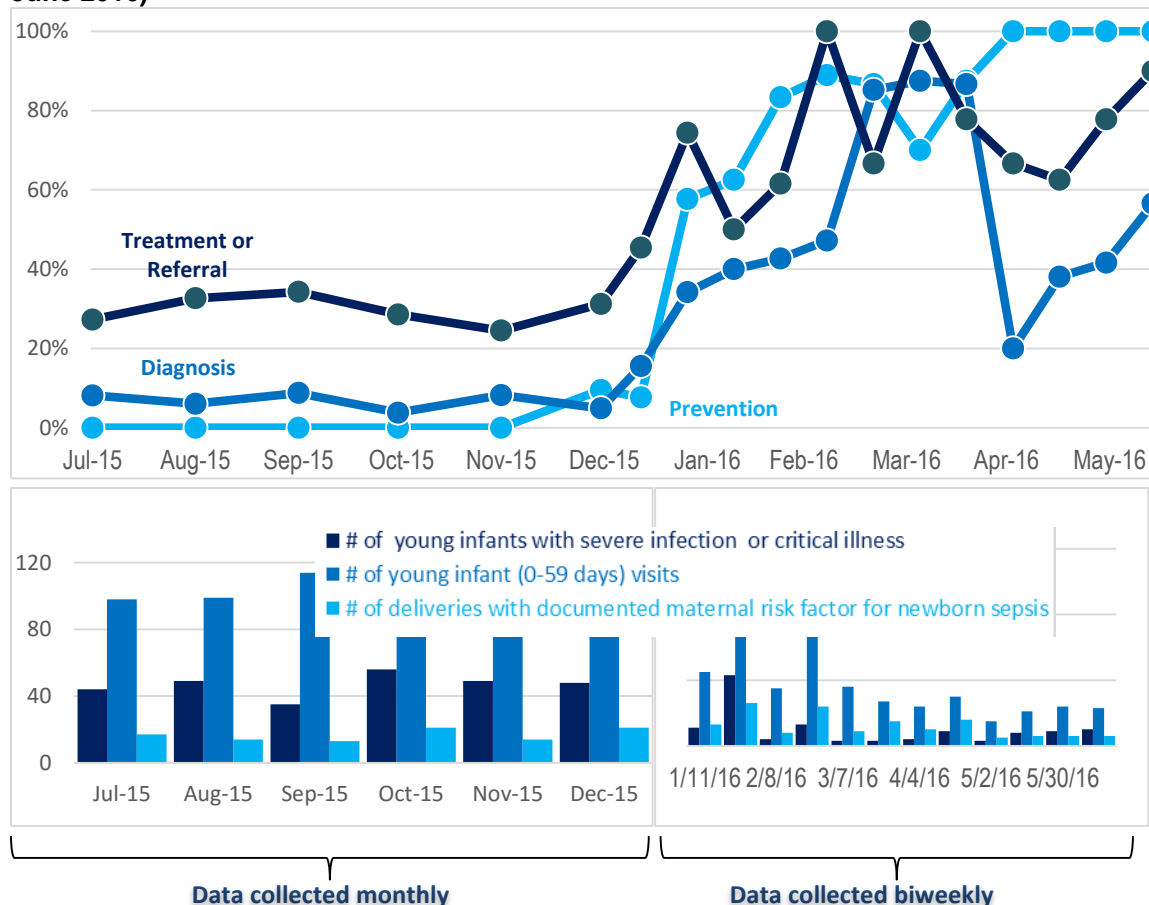
reminders for mother and HWs as well as scheduling health education talks to mothers. By gradually testing these changes, the number of children assessed for vaccination dramatically improved (**Figure 117**), and those identified with missed opportunities were counseled and referred for due vaccination.

Figure 117. Uganda: Percentage of children under five years with vaccination status documented in OPD, 10 facilities in Nwoya and Gulu districts (July 2015 – March 2016)



- **Conducted a learning session of IMNCI sites in Northern Uganda** (May 2016). The learning session focused on sharing gaps and successful changes implemented by facility teams to improve quality of IMNCI in project-supported facilities; representatives of the District Health Office as well as district coaches have been actively engaged in these discussions. The learning session also included practical skill building and clinical sessions regarding the up-to-date evidence-based IMNCI care best practices.
- **The project closely coordinated with other implementing partners to improve availability of essential inputs in project-supported facilities.** Specifically, as a result of these efforts, two infant scales and two digital thermometers were delivered to each facility (April 2016)
- **Significant turnover of skilled staff and so called “validation exercise” (requirement for all health workers to travel to the capital to prove their qualifications as well as services provided) in project-supported facilities had negative impact on the progress in IMNCI improvement.** Specifically, reduction of skilled care providers at facilities in April 2016 negatively affected on the performance of disease classification, evidence-based management of possible severe bacterial infections among young infants (**Figure 118**) as well as on selected child care indicators (**Figure 119**). However, as a result of intensive clinical and QI coaching, facilities managed to quickly orient new staff and improve performance in all routine IMNCI measures.

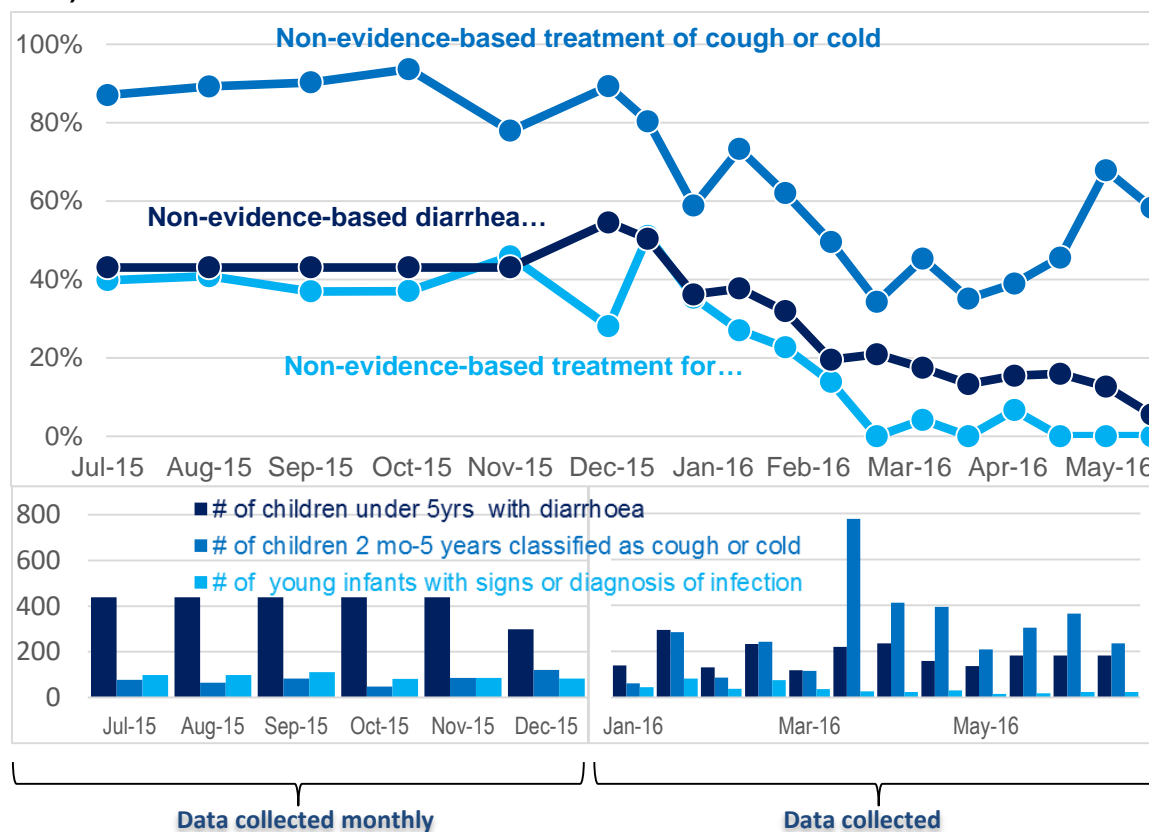
Figure 118. Uganda: Prevention, diagnosis and treatment of young infants with signs or classification of severe infection, 10 health facilities in Nwoya and Gulu districts (July 2015-June 2016)



- TESTED CHANGES**
- ✓ Onsite capacity building (QI. Clinical)
 - ✓ Developing and display of Job Aids
 - ✓ Involving Village Health team in screening for danger signs & triage (before OPD visit)
 - ✓ Designating triage area
 - ✓ Documenting risk factor in adjusted OPD register
 - ✓ Assigning a focal person to crosscheck registry
 - ✓ Routine coaching through district management team

- **As noted above, limited availability of skilled staff also had negative influence on management of cough and cold:** It is highly likely that since non-EB treatment of cough and cold was widespread practice at the baseline (87%), new staff continued routine prescription of antibiotics during cough and cold. However, staff turnover did not affect much the conditions with initial better performance in non-EB use (**Figure 119**).

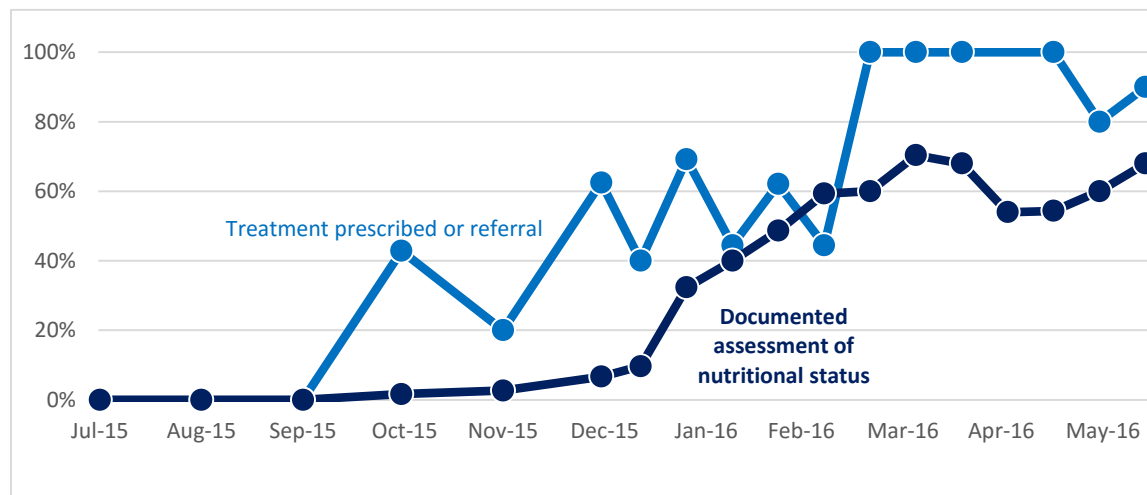
Figure 119. Uganda: Reducing irrational use of medications in management of young infant infections, cough and diarrhea, 10 health facilities, Gulu and Nwoya districts (July 2015-June 2016)



- TESTED CHANGES**
- ✓ Monthly clinical coaching on IMCI by district management team
 - ✓ On-the-job mentorship by knowledgeable facility staff
 - ✓ Job aids pinned up in consultation areas
 - ✓ Assigning focal person to cross-check prescriptions in register

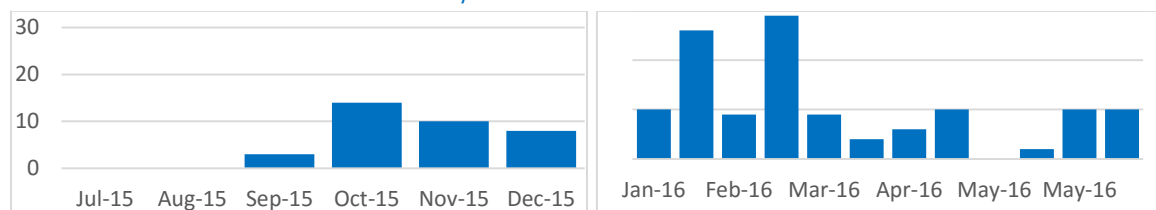
- **Routine nutrition assessment as well as treatment and referral of severely malnourished children for appropriate care was achieved by re-organizing and assigning responsibilities within the care providers and support staff /Village Health Team members (VHTs).** Specifically, support staff/VHTs have been oriented and assigned to assess children before OPD visit with care provider, designating a corner for triage and assessments, displaying reminders, improving availability of scales and MUAC within facilities and adding relevant column in the old OPD registry (**Figure 120**).

Figure 120. Uganda: Assessment of nutrition status and treatment of acute malnutrition, 10 health facilities, Nwoya and Gulu districts (July 2015 – June 2016)



Denominator 1: random sample of 30 records of 2 month – 5 year old visits in 10 health facilities (300 visit per data point)

Denominator 2: number of children under 5yrs with Severe Malnutrition in 10 health facilities

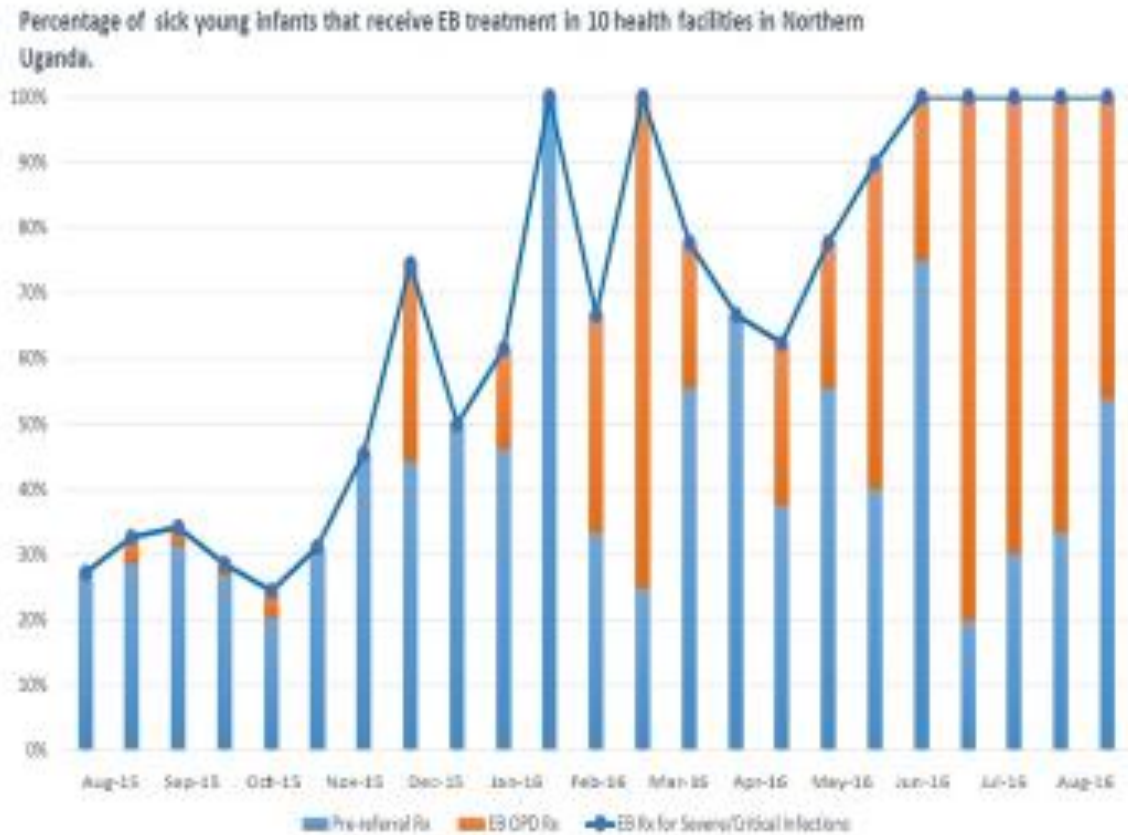


TESTED CHANGES

- ✓ On site clinical coaching
- ✓ Re-organizing and assigning responsibilities.
- ✓ Added column in the OPD register.
- ✓ Designating a corner for triage and assessments.
- ✓ Mentoring and assigning support staff /VHT daily to assess under five children.
- ✓ Adding reminder for OPD staff

- **Dr. Chitashvili travelled to Uganda to advance implementation of the Child Health Improvement Activity in North Uganda, including planning the second learning session and regular coaching (Aug 2016).**
- **Dr. Chitashvili made an oral presentation on “Improving Management of Possible Severe Bacterial Infection (PSBI) in Young Infants” in Uganda as part of the improving integrated management of newborn and childhood illnesses” at the national quality improvement forum in Uganda and participated in the plenary discussions on the challenges and opportunities to scale up PSBI improvement best practices countrywide (Aug 2016).**
- **In Q4 the health facility teams have achieved improvement in the evidence-based treatment of young infants with PSBI (Figure 121).** Specific changes contributed to improved treatment of PSBI include: onsite skill building and continuous peer-to-peer mentorship, demonstration of video materials to recognize clinical signs of PSBI, and teaching the skills needed for treatment, developed by USAID Global Health Media Project (available at: <http://globalhealthmedia.org/videos/newborn/>) and regular quantification and timely ordering of antibiotics to prevent stock-outs.

Figure 121. Uganda: Proportion of young infants with signs of Possible Severe Bacterial Infection that receive evidence based treatment, Nwoya and Gulu districts (Aug 2015-Aug 2016)



- These changes together with efforts to revise existing outpatient registries and document vital and danger signs and symptoms of PSBI greatly contributed to improved assessment and treatment of young infants at risk (**Figure 122**).

Figure 122. Uganda: Progress in selected indicators related to assessment and treatment of young infants, Nwoya and Gulu districts (Jul 2015 – Aug 2016)

Indicators	Baseline	→	August, 2016
% of newborns with maternal risk factors for sepsis to whom prophylactic antibiotic treatment is initiated	0%	→	91%
% of young infants with documented vital signs (RR and t)	0%	→	50%
% of young infants with documented severity assessment	0%	→	50%
% of young infants to whom severity classification is documented based on IMCI protocol	8%	→	64%
% of young infants with signs of infection and/or any of the following diagnosis (Sepsis, pneumonia, RTI, meningitis) treated with non EB medications	40%	→	0%

- **Evidence-based management of common childhood infections using standard IMCI protocols by simultaneous reduction of non-justified antibiotics has progressively improved among the collaborative sites (Figure 123, Figure 124, and**
- **Figure 125).** Specifically, while evidence-based treatment of pneumonia improved (**Figure 123**), irrational use of antibiotics to treat cough and cold and diarrhea have been dramatically reduced. **Figure 124** also indicates improved diagnosis of cough and cold. Confidence in proper assessment and diagnosis of common childhood conditions more likely allowed providers to avoid unjustified use of antibiotics, when not necessary (**Figure 124** and
- **Figure 125).** Improved evidence-based treatment has been achieved by continuous peer-to-peer mentorship along with supervision. The facilities have reorganized and assigned staff to periodically review outpatient registries to identify gaps and address them timely. Facility teams also monitor drug stock outs and coordinate with district teams to effect timely redistribution of drugs and logistics when necessary. Providers also received capacity building in preventive approaches, such as WASH strategies, immunization and feeding (Sept 2016).

Figure 123. Uganda: Improved fist line antibiotic prescription practices to treat pneumonia among children, Nwoya and Gulu districts (Jul 2015 – Aug 2016)

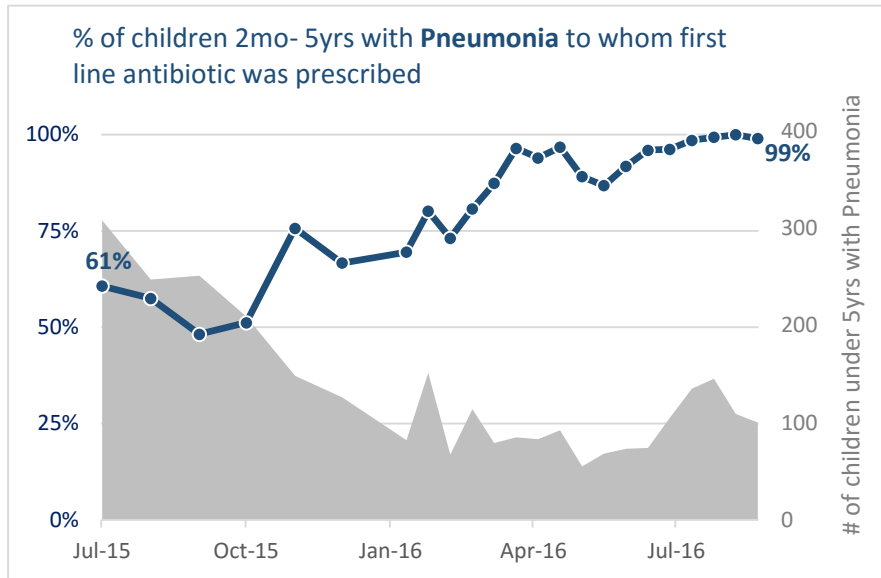
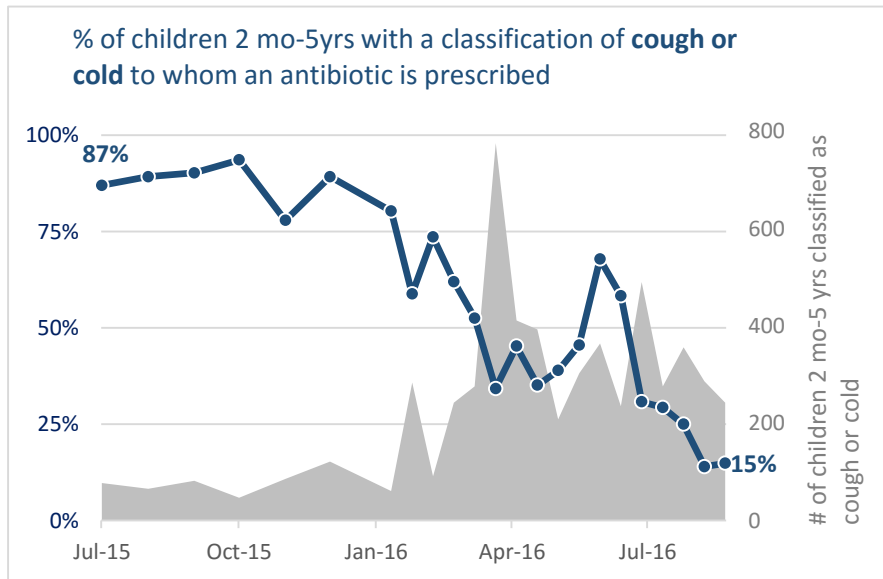
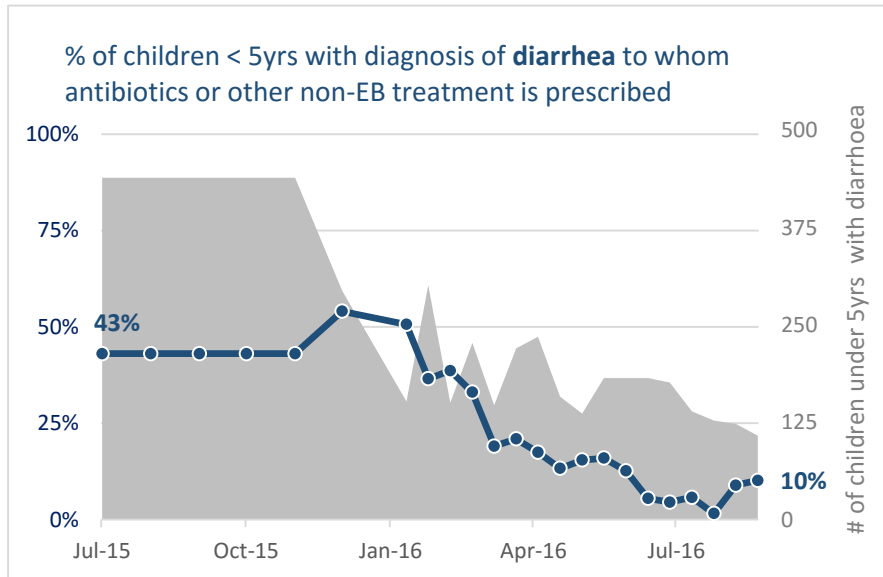


Figure 124. Uganda: Progress in reducing unjustified antibiotic prescription among pediatric patients during cough and cold, Nwoya and Gulu districts (Jul 2015 – Aug 2016)



patients during cough and cold, Nwoya and Gulu districts (Jul 2015 – Aug 2016)

Figure 125. Uganda: Progress in reducing non-evidence based medications to treat diarrhea among children, Nwoya and Gulu districts (Jul 2015 – Aug 2016)



- The facility QI teams improved performance in nutrition and vaccination assessment and referral practices (Figure 126, Figure 127, Figure 128)** This was made possible through adding columns for documentation of vital signs, nutrition, and vaccination assessment results in the outpatient register, continuous capacity building of all staff (including non-clinical staff), establishing routine clinical supervision and mentorship within facilities, reorganizing triage points, and assigning clear responsibilities to staff involved in assessment of vital signs, vaccination, nutrition status, counselling, and referral; and shifting assessment tasks from clinical staff to non-clinical staff at Outpatient Department (OPD) (e.g.. village health teams). These changes have greatly contributed to improvements in nutritional, vaccination and vital signs assessment and referral practices.

Figure 126. Uganda: Progress in improved assessment and documentation of completed vaccination for age among children under 2 years, Nwoya and Gulu districts (Jul 2015 – Aug 2016)

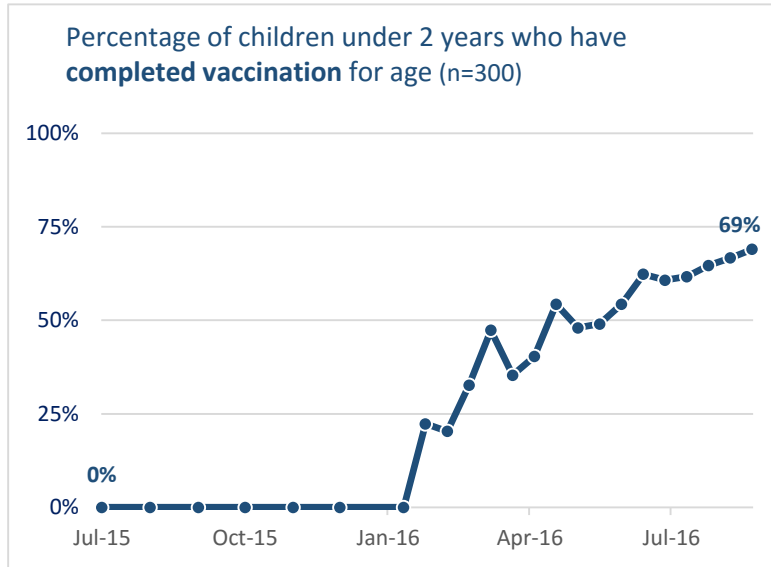


Figure 127. Uganda: Progress in improving assessment of children at outpatient department (OPD), Nwoya and Gulu districts (Jul 2015 – Aug 2016)

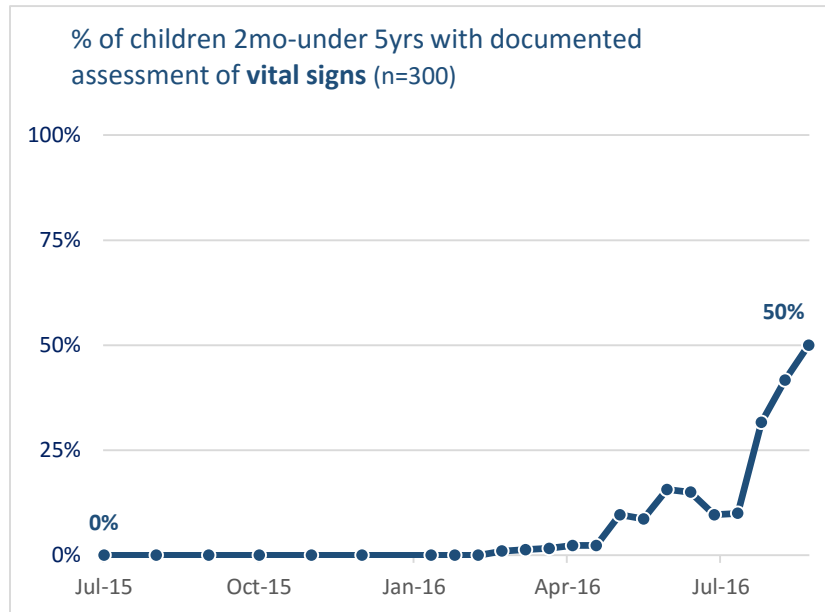
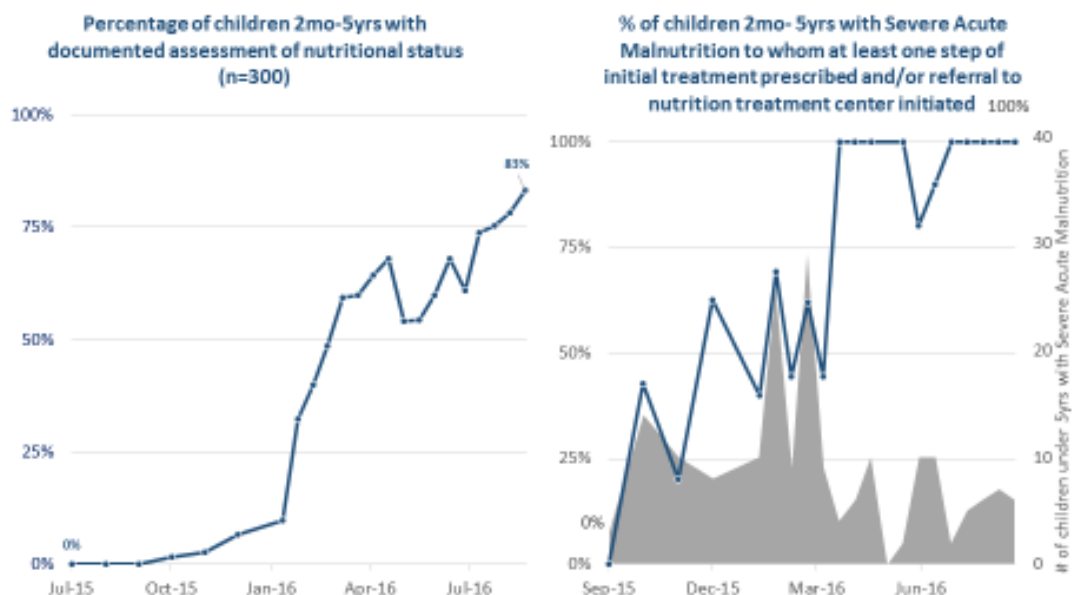


Figure 128. Uganda: Progress in improving nutrition assessment and initial treatment/referral of children under five at OPD, Nwoya and Gulu districts (Jul 2015 – Aug 2016)



- **The ASSIST team conducted the second learning session of the child health collaborative (Sept 2016).** The learning session was focused on sharing successful changes and approaches (what and how) that have been implemented by facility teams to improve the quality of newborn and child health services. The ideas that worked were used to promote learning across the collaborative sites and will be used to develop a child health change to scale up child health improvement best practices countrywide. The health workers also refreshed their knowledge and skills on assessment, classification and management of common childhood and young infant conditions. This was achieved by demonstrating videos on recognition and treatment of PSBI, developed by USAID Global Health Media Project and plenary discussions on selected high priority clinical topics of IMNCI (Sept 2016).
- **Developed a change package for spread of child health interventions in Northern Uganda through USAID ASSIST field-funded activities (Sept 2016)**
- **Conducted district performance review meetings with DHOs for Nwoya and Gulu districts (Sept 2016)**

IMPROVEMENT IN KEY INDICATORS

Activity	Indicators	Baseline (March 2015)	April 2016 (10 sites)	August 2016 (10 sites)
Primary care ANC delivery and the quality of integrated care for preeclampsia/eclampsia	% of mothers whose blood pressure was assessed	71% (9 sites)	95%	98%
	% of women with a BP \geq 140/90 whose urine was assessed for protein with dipstick	0% (9 sites)	56%	88%
	% of mothers at ANC with fever or history of fever who had a malaria test done	0% (8 sites)	90%	97%
	% cases of malaria diagnosed and treated among all ANC visits	2% (9 sites)	3%	5%

	% of mothers at 1st ANC visit whose hemoglobin was assessed by laboratory	0% (9 sites)	2%	8%
	% of mothers who received correct dose of iron/folic acid tablets at any ANC visit	39% (9 sites)	70%	80%
	% of mothers at any ANC visit whose hemoglobin was found below 10.5g/dl and who received treatment as per MOH guidelines	0% (9 sites, Apr '15)	80%	36%
	% of mothers at 1st ANC visit screened for syphilis	0% (9 sites, Apr 2015)	82%	57%
	% of cases of preeclampsia diagnosed among all ANC visits (HC)	0% (9 sites)	0.65%	0%
	% of severe pre-eclampsia or eclampsia cases seen at Jinja RRH who receive correct treatment of pre-eclampsia and eclampsia	0%	100%	100%
Activity	Indicators	July 2015 (10 sites)	June 2016 (10 sites)	Aug 2016 (10 sites)
Treatment of childhood illnesses	% of young infants to whom severity classification is documented based on IMCI protocol	8%	57%	62%
	Evidence-based treatment of young infants with PSBI, including:	24%	90%	100%
	% of young infants with signs or classification of severe infection or critical illness referred to higher level facilities to whom EB initial treatment is administered	50%	80%	100%
	% of young infants with signs or classification of severe infection or critical illness treated out-patiently to whom full EB treatment is prescribed	0%	100%	100%
	% of young infants with signs of infection and/or any of the following diagnosis (Sepsis, pneumonia, RTI, meningitis) treated with non EB medications	40%	0%	0%

	% of children 2mo-5yrs with documented assessment of nutritional status	0%	68%	82%
	% of children 2 months - 5yrs with SAM to whom at least one step of initial treatment prescribed and/or referral to nutrition treatment center initiated	0% (Sept '15)	90%	100%
	% of children 2 months - under 5yrs with a classification of cough or cold to whom antibiotics is prescribed	87%	58%	15%
	% of children 2 months -under 5 years with malaria, treated with concurrent unjustified antibiotics therapy	30%	8%	9%
	% of children under 5 yrs with a diagnosis of diarrhea, where antibiotics or other non-EB treatment is prescribed	43%	5%	8%
	% of children under 5 yrs. with vaccination status documented in OPD	0%	65%	82%
	% of children under 5 years who have completed vaccination for age	0%	62%	69%

SUSTAINABILITY AND INSTITUTIONALIZATION

To promote ownership and institutionalization, all activities are planned and led in close collaboration with the MOH and other key stakeholders in Uganda. The officers in charge of the MNCH programs at the MOH and at each of the participating districts are closely involved in all the stages of each activity, from planning to evaluation. ASSIST is making every effort to make the changes and improvements not dependent on external resources that would not be sustainable after activities end. In addition, ASSIST MNCH core-funded activities will inform global learning on effective strategies to institute and sustain the best improvement practices in different MNCH clinical areas and settings. We aim to identify a few basic indicators within a scheme of regular monitoring and feedback, ideally within the official management information systems.

Office of Health Systems-Funded Activities

CROSS-BUREAU ACTIVITIES

BACKGROUND

The Office of Health Systems (OHS) undertakes health systems strengthening work to contribute to USAID's goal of Ending Preventable Child and Maternal Deaths (EPCMD). OHS invests cross-bureau funds for global learning surrounding the successful development and testing of interventions related to Universal Health Coverage (UHC), finance, governance, service delivery, medical products, vaccines and other technologies, and information systems.

Since FY13, OHS cross-bureau funds have supported the USAID ASSIST Project in strengthening

essential system functions and improving and sustaining high-impact, evidence-based health care. In FY16 (using FY13, FY14, and FY15 OHS cross-bureau funds), ASSIST implemented the activities described below.

PROGRAM OVERVIEW

What are we trying to accomplish?	At what scale?
1. Revision of USAID's Health Systems Assessment Approach (HSAA)	
<ul style="list-style-type: none"> Update technical content to reflect current systems thinking and global health priorities, increase uptake in EPCMD priority countries as well as improve applicability to low resource settings. 	<ul style="list-style-type: none"> Global
2. Inform development of implementation research learning agenda for results-based financing and quality of care	
<ul style="list-style-type: none"> Conduct an evaluation examining the effect of a results-based financing intervention on quality of care for maternal and newborn child health services. 	<ul style="list-style-type: none"> Uganda
3. Salzburg Global Seminar	
<ul style="list-style-type: none"> Develop a statement that will provide guidance on how we learn about improvement, published in a peer-reviewed journal following the seminar. The statement will outline different options for learning about improvement, including their strengths and weaknesses, and core design and methodological principles. 	<ul style="list-style-type: none"> Global
4. Institutionalize the capacity to examine and improve neglected health care processes: Phases I and II	
<ul style="list-style-type: none"> Phase I: Assess the quality of case management through a baseline survey of services. Phase II: Address gaps in quality of care of febrile patients. 	<ul style="list-style-type: none"> 2 districts in Malawi out of 28 (Balaka and Mchinji) with 1 control district (Machinga) 1 district hospital, 3 health centers, and 3 Village Health Clinics in each district 14 QI teams
5. Application of WHO's Framework for Integrated Person-Centered Health Services (IPCHS): Phase I	
<ul style="list-style-type: none"> Apply people-centered care framework in partnership with WHO 	<ul style="list-style-type: none"> Mali: 5 facilities in two districts (Diéma and Yelimane) in Kayes Region South Africa: 10 facilities in one district (Nelson Mandela) in Eastern Cape Province
6. Governance and quality: Institutional roles and relationships to ensure service delivery quality: Phases I and II	
<ul style="list-style-type: none"> Assess and document global experience in institutional relationships that govern quality in the health sector and provide practical and action-oriented guidance to countries on success factors in structuring roles, responsibilities, and relationships. 	<ul style="list-style-type: none"> Global

What are we trying to accomplish?	At what scale?
7. Strengthen Internet-based newborn care communities of practice and regional virtual collaborative to reduce hospital newborn sepsis	
<ul style="list-style-type: none"> Strengthen systems and services that support delivery of high-quality KMC and newborn resuscitation using internet-based applications to reduce costs and increase efficiency; test multi-country “virtual collaborative” to reduce newborn sepsis. 	<ul style="list-style-type: none"> Colombia, Ecuador, El Salvador, Honduras, Mexico, Nicaragua, Paraguay, Venezuela
8. Develop basic improvement course for the Global Health eLearning (GHeL) platform	
<ul style="list-style-type: none"> Increase basic knowledge and understanding of improvement approaches in USAID staff, Ministry of Health officials, health care managers, and other global health professionals through the development of a GHeL course. 	<ul style="list-style-type: none"> Global
9. Basic improvement course and workbook	
<ul style="list-style-type: none"> Build competencies of health care professionals to continually improve the quality of the services they provide in order to improve health outcomes. 	<ul style="list-style-type: none"> Global
10. Pre-service improvement curriculum	
<ul style="list-style-type: none"> Pilot pre-service training in improvement methods and strategies. 	<ul style="list-style-type: none"> Kenya Medical Training College and Moi University
11. Introduction to improvement course and facilitator’s guide	
<ul style="list-style-type: none"> Increase access to basic improvement training at no cost to course participants and interested facilitators. 	<ul style="list-style-type: none"> Global
12. Support quality improvement activity design in USG projects: Course for USG staff and host country government leaders	
<ul style="list-style-type: none"> Increase understanding of science of improvement as well as increase knowledge of key components of improvement among USG staff and host country government leaders. 	<ul style="list-style-type: none"> Global
13. Quality improvement case book	
<ul style="list-style-type: none"> Develop and submit for publication the first case book to describe in detail how teams of providers and managers in low-resource settings used tests of change to improve selected health care processes 	<ul style="list-style-type: none"> Global
14. Learning Laboratory for Quality Universal Health Coverage (QUHC)	
<ul style="list-style-type: none"> Provide recommendations on structure and operating principles for the Learning Lab based analysis of global experience with learning platforms on a landscape and consultations with stakeholders; following several months of implementation, take stock through analysis of website metrics and surveys of participants and stakeholders. 	<ul style="list-style-type: none"> Global

What are we trying to accomplish?	At what scale?
15. System strengthening for EPCMD	
<ul style="list-style-type: none"> Utilizing improvement science to provide support to institutions about how to use QI approaches to prevent neonatal deaths. 	<ul style="list-style-type: none"> Global

Improvement Activity

Cross-cutting Activity

Activity 1. Revision of USAID’s Health Systems Assessment Approach (HSAA)

OVERVIEW

USAID OHS asked implementing partners to collaborate with each other and with other Global Health implementing partners that work in Health Systems Strengthening (HSS) to update and revise the Health Systems Assessment Approach. The HSAA is approximately five years old. Thus, the technical content of the HSAA needs to be updated to incorporate new knowledge and priorities, including updating the technical content of the modules, organized per health system functions according to the WHO building blocks. In addition, the HSAA needs to better inform policy/program decision making at the country and regional levels, particularly regarding scale-up of demonstrated high-impact interventions, improving reproductive and MNCH care, and addressing universal health coverage.

KEY ACCOMPLISHMENTS AND RESULTS

- Revisions to assigned modules and annexes of HSAA manual** (Jan – June 2016). Revised draft modules sent to USAID Health Finance & Governance Project (HFG) after coordinating the revisions by different partner organizations. Revisions were made to reflect recent global strategies and up-to-date evidence on improving priority services and health outcomes.
- Sent draft chapters of the HSAA manual to WHO for review by relevant groups** (June 2016).

Activity 2. Inform development of implementation research learning agenda for results-based financing and quality of care

OVERVIEW

Uganda has developed a National Performance-based Financing (PBF) Framework with the goal of contributing to the reduction of morbidity and mortality by promoting efficient delivery of and access to quality cost effective services. The main objectives of the National PBF program are to:

- Enhance the utilization, efficiency, and quality of health services delivered to the population of Uganda while improving equitable access to these services.
- Increase the Government of Uganda’s strategic purchasing of cost-effective services so as to contribute to significant reductions in morbidity and mortality.

The USAID Regional Health Integration to Enhance Services in South West Region of Uganda (RHITES –SW) project has invited ASSIST to evaluate a results-based financing (RBF) approach to improving the quality of MNCH services delivered at five target facilities in two project districts in South Western Uganda. Results of this evaluation will be used to:

- Inform the Uganda’s Ministry of Health RBF/PBF rollout strategy.
- Improve the knowledge base for effectively implementing RBF activities to improve quality of care in an EPCMD country. This includes identifying appropriate incentivized indicators that can be incorporated into an RBF mechanism and lead providers to undertake a QI strategy
- Build on the Global Financing Facility’s work to inform the global learning agenda for RBF and quality of care

KEY ACCOMPLISHMENTS AND RESULTS

- Met with the USAID RHITES SW team** (June 2016). The discussion centered on methodology, and it was agreed that RHITES will complete discussions with USAID to establish the services to be financed, scope, and criteria for facility selection

- **Met with RHITES-SW team** (July 2016) to discuss updates on action items and district selection. Two districts were selected for implementation with two facilities in each district; comparison sites not yet selected because selection criteria still under development, and which services were to be incentivized (RHITES-SW suggested high-impact interventions: antenatal visits, health facility deliveries, and post-natal care at 6 weeks both for the mother and the baby).
- **Conducted initial site visit with RHITES-SW to the two facilities in each of the two intervention districts** (Aug – Sept 2016). During this visit, staffing levels were assessed, opinions of the health workers were collected, and services were observed. We examined data from the past 1.5 years (Jan 2015 – May 2016) to understand the causes in the decline in institutional deliveries and increase in the perinatal deaths in one of the intervention districts. We participated in the meeting organized by RHITES-SW to introduce the RBF concept to the districts and facilities. Participants were given an opportunity share their suggestions on what would comprise the incentive package and what particular items would be incentivized.

Activity 3. Salzburg Global Seminar

OVERVIEW

This meeting brought together 60 leaders in improvement and research from 10 organizations in 28 countries to think through the best ways to learn about improvement and respond to legitimate questions on attribution and generalizability. These questions include how we know whether results achieved can be attributed to the intervention conducted, as well as “how” or “why” a successful result was achieved. Over one week, participants engaged in a series of dynamic discussions and deliberations regarding the epistemology of improving healthcare. We reviewed learning methods and techniques to produce products that inform and advance the field, in the form of publications by the participants of the meeting. The results are being published in 9 articles in a special supplement of the ISQua Journal dedicated to the meeting.

KEY ACCOMPLISHMENTS AND RESULTS

- **Salzburg Global Seminar convened with 60 Fellows from 10 organizations including USAID, country Ministries of Health (MOH), and WHO** (July 2016).

Activity 4. Institutionalize the capacity to examine and improve neglected health care processes – Phases I and II

OVERVIEW

This activity focuses on the care of patients (specifically, children under age five and pregnant women) presenting at facilities with febrile illnesses in three districts (two interventions and one control) in Malawi. ASSIST conducted an assessment to understand the process of care and systems that support it at three levels of the health care system in each district: one district hospital (DH), three health centers (HC), and three village health centers (VHC), for a total of 21 sites in each district. In Phase II, ASSIST worked with health facilities and QI teams on continuous skill-building through learning sessions, on-site coaching, and weekly phone call coaching to build capacity in QI principles and techniques and how to continuously collect data on various indicators using assessment tools and tracking changes toward reaching their respective aims.

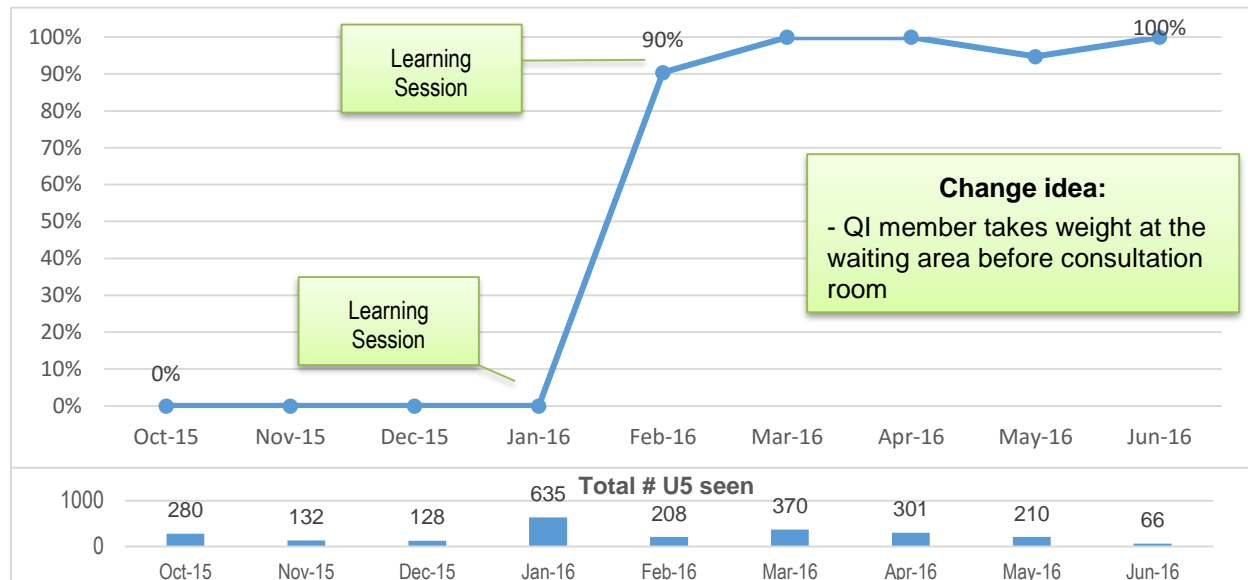
KEY ACCOMPLISHMENTS AND RESULTS

- **Developed and field tested tools for understanding care processes and systems** (Dec 2015 - Jan 2016). The tools were tested through data collection in one district. The assessment tools have three related components: 1) facility-level indicators that draw on data from registers and interviews with facility staff; 2) clinical observation checklists; and 3) flow-chart mapping to document the process of care. The tools are designed to, among other goals, test a set of about 14 core indicators that are likely to constitute the basis for time series charts that will track the effect of improvements to the care process made over time in the facilities.
- **Finalized data collection tools for understanding care processes and systems** (Feb 2016). The four data collection tools are for health workers in Malawi to understand their processes of

care for children under five and pregnant women presenting with febrile illnesses. The data that will help QI teams identify and analyze gaps in care and outcomes for patients with febrile illness.

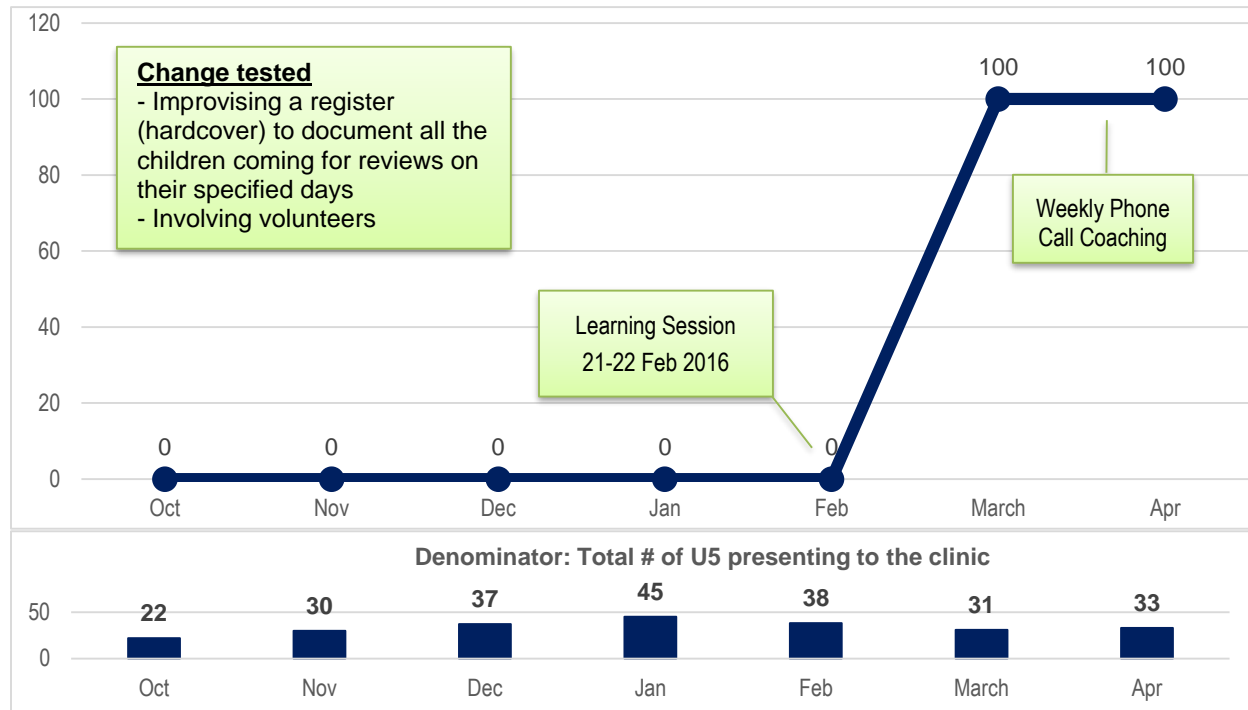
- **Held two district-based learning sessions** (Feb 2016) and **one Lilongwe-based learning session for all QI teams** (Mar 2016). Learning sessions were conducted separately for Mchinji and Balaka QI teams. The QI teams from the district hospital, three health centers and three village clinics in each district were equipped with QI strategies. Having gone through the QI instructions, the QI teams developed their aims and indicators based on their baseline findings from their respective facilities. The teams were advised to further polish their aims and indicators for plenary sessions at the joint learning session (Mchinji and Balaka) which was held in Lilongwe. At the joint learning session in Lilongwe, the QI teams again presented their draft improvement aims in order to get feedback and refine them. During the meeting, the ASSIST technical team presented data collection tools for the QI teams to use in their health facilities. Gender integration was introduced to the teams, including basic definitions of gender, sex, gender norms, and the importance of sex-disaggregated data.
- **QI teams began collecting first wave of data** (Mar 2016).
- **Completed febrile illness diagnosis/case management assessment guide: Health facility quality assessment guide to support global learning goals** (Mar 2016). This guide features content aimed at facility-level improvement teams to complete an assessment of their current systems and processes to care for children under age five and pregnant women that present with fever. The guide walks a team through three action steps: 1) plan their current state quality assessment; 2) manage and carry out the assessment process; and 3) analyze their data and information to prioritize improvement goals. It includes several tools to assist with planning and managing the assessment, as well as an organized process for collecting the right data to assess their health care service delivery, facility capacity and patient outcomes. Generic versions of the data collection tools, originally designed for the Malawi assessment phase, focus on quality indicators that make visible the care processes and outcomes for uncomplicated febrile illness and severe febrile illness for these two populations with a high-burden of malaria, and other infectious diseases.
- Supported the NMCP to conduct a series of skill-building and learning sessions for the two intervention districts **targeting a total of 90 multi-disciplinary health workers to help the teams to identify problems affecting delivery of care for children under five and pregnant women presenting with febrile illness** (Apr and June 2016).
- **Collected data using the facility assessment tool in all three districts** (Apr – May 2016). All 14 intervention sites identified gaps by themselves by either using a fishbone diagram or by process mapping.
- **Improved the number of febrile children under five diagnosed with malaria and treated with artemether lumefantrine (AL) based on the child's weight at Kwitanda Health Centre in Balaka District** (June 2016). Change ideas tested include: 1) Assigning one QI member to take weight in the waiting area before consultation, and 2) Putting the weighing scales in the consultation room during odd hours (weekends and night) for the clinician to take weight her/himself. After testing these two changes for one month, the facility noticed that 90.4% of all children had their weight taken and received AL based on weight. By the second month, 100% of all children had their weight taken, and this has been sustained through April (See **Figure 129**).

Figure 129. Malawi: Percent of febrile children under age five prescribed AL based on weight, Kwitanda HC (Oct 2015 – June 2016)



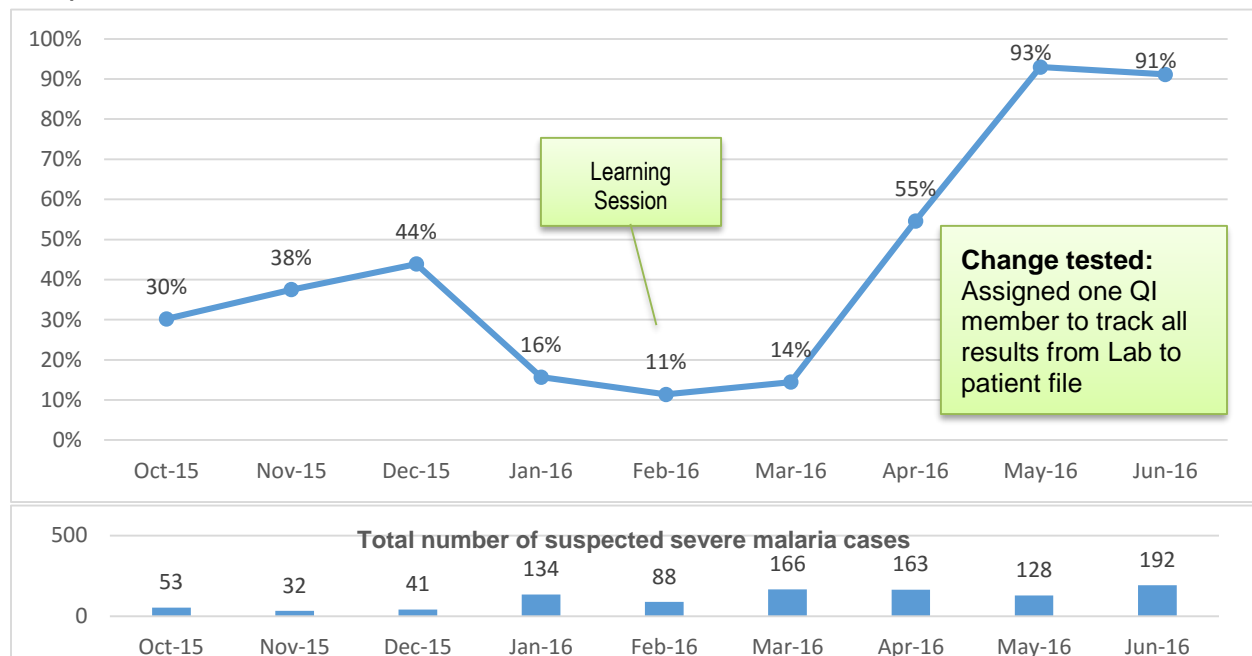
- Improved the proportion of febrile children under age five coming for day three follow-up regardless of the mRDT test result at Mphanga Village clinic (Oct – Apr 2016).** Changes tested include: 1) to document all the febrile children to compare with those coming on the review due date, and 2) involve a volunteer, a member of the community, to remind the caretakers to bring their children for review at the clinic. Introducing these two changes led to 100% of children with febrile illness coming back within three days for review. Before the QI intervention, there was no mechanism for tracking patients that were coming for follow, thus no data were available (Figure 130).

Figure 130. Malawi: Percent of febrile children under age five returning for follow-up on day 3, Mphanga Village Health Center (Oct 2015 – April 2016)



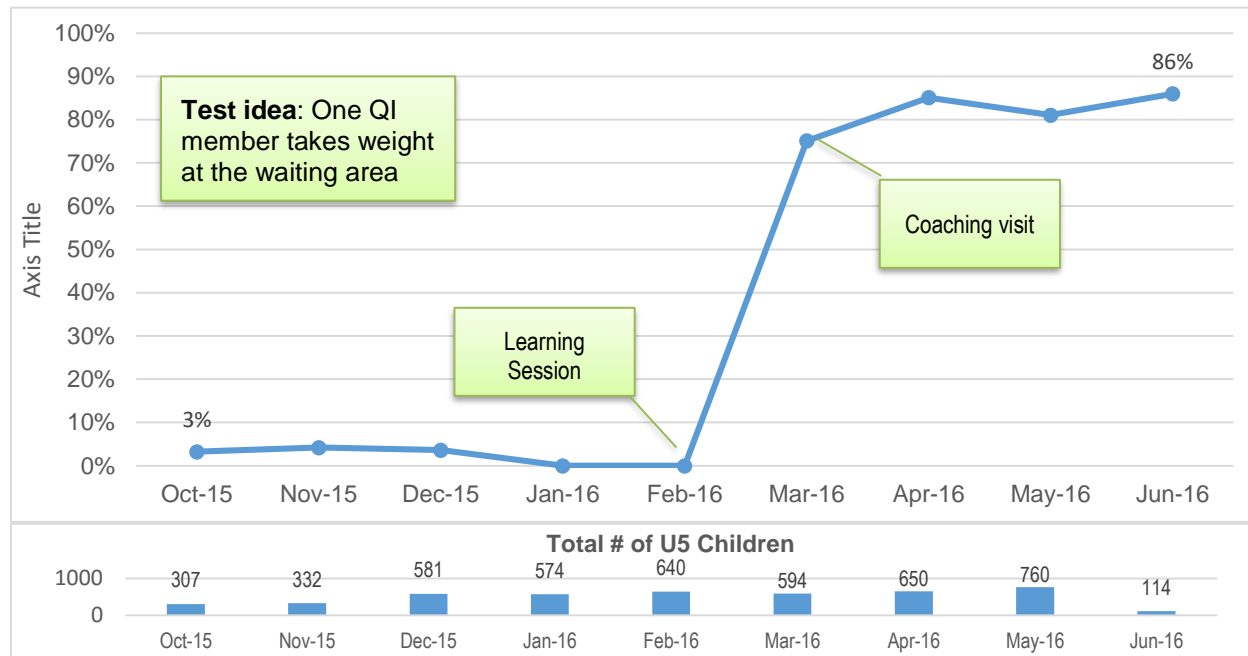
- Improved confirmation of malaria through microscopy for febrile patients with suspected severe malaria at Balaka District Hospital (Apr 2016).** According to the NMCP guidelines, all suspected severe malaria cases should be confirmed by use of microscopy. Balaka District Hospital identified a clinical gap showing that microscopy was not adequately used in making confirmatory diagnosis of children under age five with suspected severe malaria. Change ideas tested included: 1) All clinicians advised to stop ordering mRDT on all suspected severe malaria cases; and 2) nurses to make sure that blood smears for malaria are collected from all the suspected cases of severe malaria and sent to laboratory. Following the implementation of these two change ideas and skill building sessions and coaching, the proportion of suspected severe malaria cases in children under age five investigated with microscopy improved from 14.5% in March to June 91% (**Figure 131**).

Figure 131. Malawi: Percent of under children under age five suspected of severe malaria who had blood smear for malaria (microscopy) done, Balaka District Hospital (Oct 2015 – June 2016)



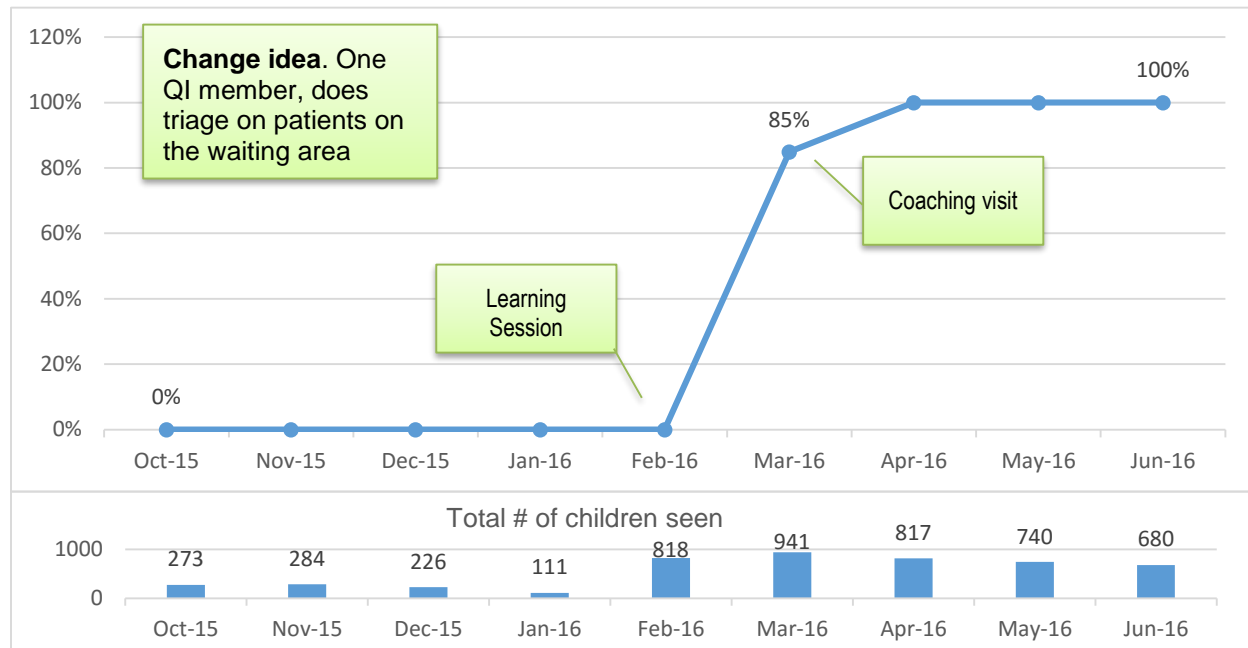
- Improved the percent of sick children under age five diagnosed with malaria by mRDT and treated with AL based on weight at Chioshya Health Centre (Oct – June 2016).** Change ideas tested included: 1) Assign one QI member to take patient's weight in the waiting area before consultation; and 2) document the weight for all the children on daily basis in the AL register. **Figure 132** shows the results of testing these two changes, showing that 75.1% of children had their weight taken and received AL based on weight after one month, and 85.1% after two months and by June 2016, 86% of the children had their weight taken.

Figure 132. Malawi: Percent of febrile children under age five treated with AL based on weight, Chioshya Health Centre (Oct 2015 –June 2016)



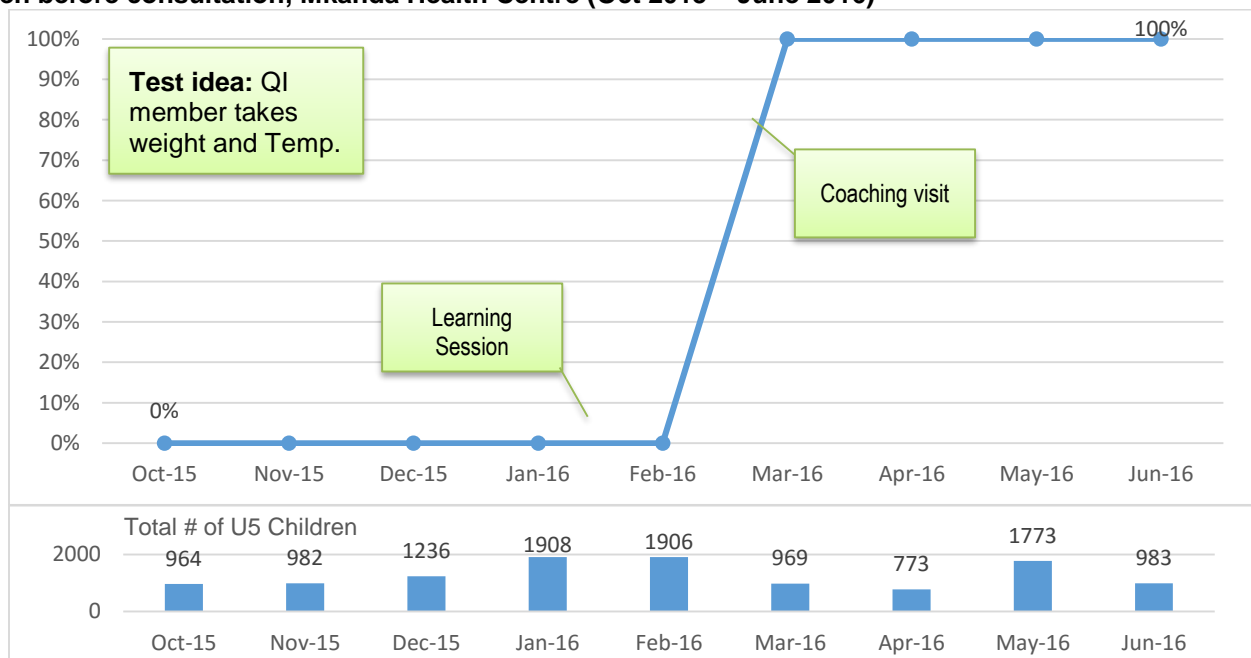
- Improved the number of sick children under age five who are triaged-categorized into the level of severity before consultation at Kalembo Health Centre (June 2016).** Kalembo Health Centre is one of the busiest facilities in Balaka District, seeing an average of 1,000 under-five children per month. As a result of the crowd in the waiting area, very sick children with danger signs have been deteriorating while waiting to be seen by a clinician at the facility. The QI team developed a triage system to improve the number of very sick children to be seen first: E= emergency cases, P=priority cases, and Q=Queue. Change ideas tested include: 1) Assigning one QI team member to triage the patients at the waiting area; and 2) intensifying health promotion messages on danger signs to care-takers, explaining that when they observe such signs, they should report to the health worker. **Figure 133** shows that these changes improved the number of sick children triaged.

Figure 133. Malawi: Percentage of febrile children under age five triaged before consultation, Kalembo HC (Oct 2015 – June 2016)



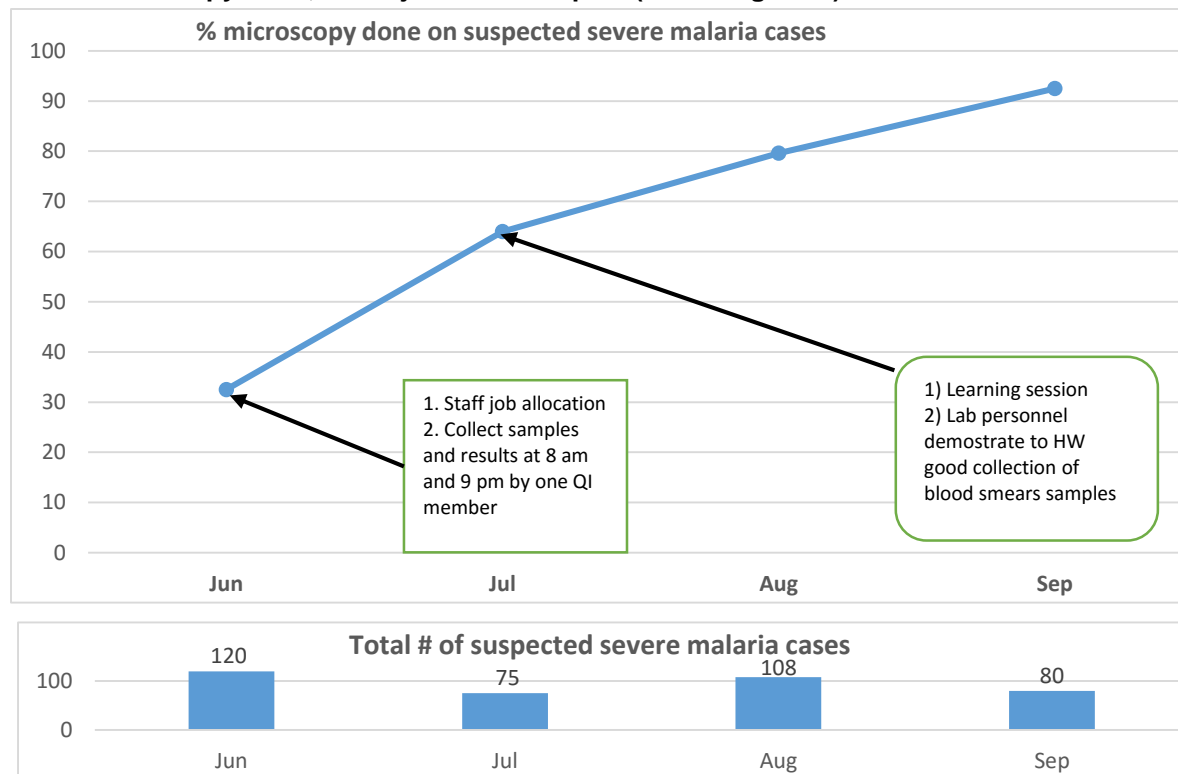
- Increased the number of children whose weight and temperature were taken before consultation, in order to improve accurate diagnosis and prescription of medications at Mkanda Health Center (Apr – June 2016).** The test ideas that were developed were 1) to have one QI team member at the waiting area to take weight and temperature; and 2) to properly document weight in the patient passport and register. Figure 134 shows the progress following learning sessions and coaching. As of June 2016, all (100%) the sick children coming for sick visit at the health center have their weight and temperature measured before consultations.

Figure 134. Malawi: Percent of children under age five whose weight and temperature were taken before consultation, Mkanda Health Centre (Oct 2015 – June 2016)



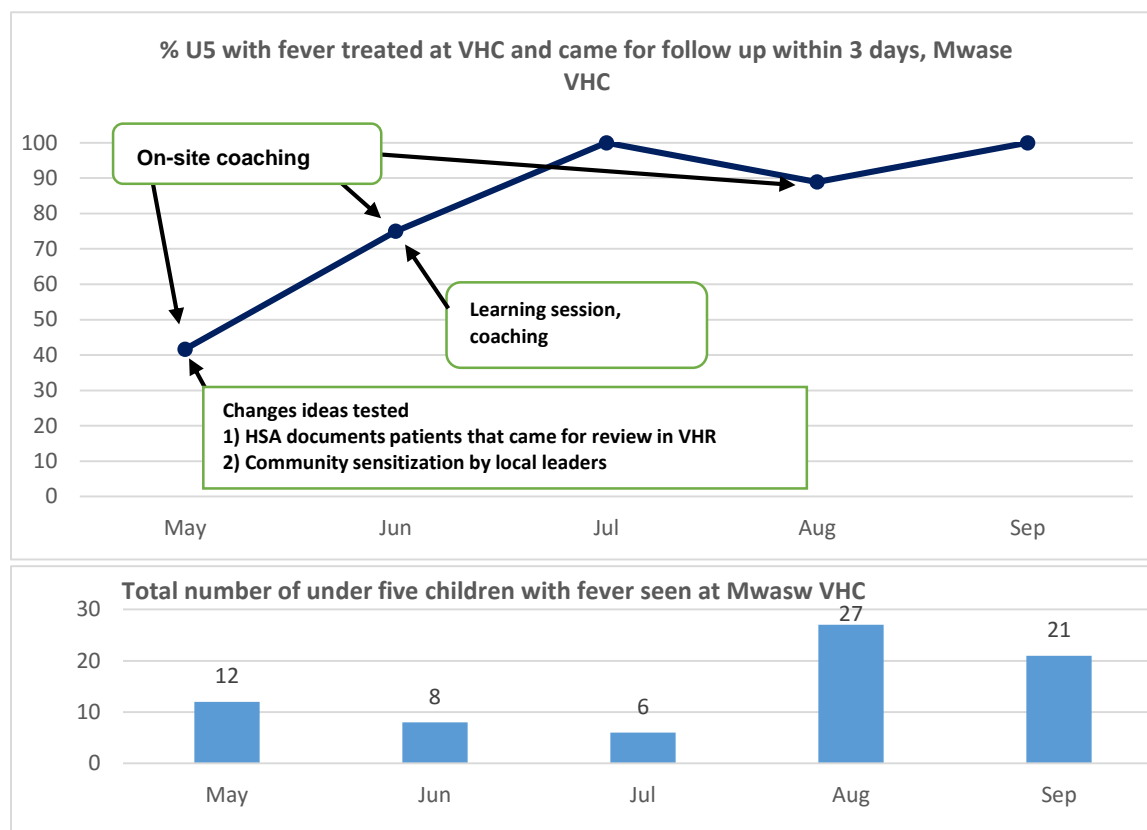
- **Conducted QI learning session** (July 2016). The NMCP with support from ASSIST conducted a quarterly learning session for 105 health workers from 14 health facilities in Dedza District. The main objectives for the learning session were to share results for the first improvement objective and some of the changes tested to improve on their targeted indicators. ASSIST presented to the teams the findings of the core indicators for the months of May and June 2016. NMCP also provided an update on the overall malaria program. The teams shared how they used process mapping/flow diagrams, fishbone diagrams, and the assessment tools to identify gaps in febrile illness diagnosis and care.
- **Collected core indicator data** (July – Aug 2106). The intervention districts continued collecting monthly data on core indicators using the following tools: 1) the facility assessment, 2) assessing treatment of uncomplicated febrile illness in children under five years of age, 3) assessing treatment of severe febrile illness in children under five years of age, and 4) assessing treatment of febrile pregnant women. During July-Sept 2016, the project has observed a progressive improvement in most core indicators in almost all QI intervention sites, and also noted that the QI teams used the data that they generate for resource mobilization from the partners and MOH in order to improve the care of febrile under age five children and pregnant women.
- **Conducted two QI coaching field visits** (July - Aug 2016). ASSIST supported the NMCP to conduct monthly QI coaching visits to all targeted 14 sites in the two districts. The main purpose for the field visits were to assess progress of the teams against their improvement objectives, to mentor the teams in data collection and in testing the changes. The team also collected compiled core indicators data from the intervention sites.
 - **Mchinji District Hospital** wanted to improve the number of febrile children under age five suspected of severe malaria and admitted in the pediatric ward whose suspected severe malaria is confirmed with microscopy, as per Malawi national guidelines, from a baseline of 20% to 100% within four months. Change ideas tested in the children’s ward included:
 - The QI team leader developed a job allocation schedule for all the QI members to collect samples and results.
 - The QI team designated 8 am and 4 pm as the times for one QI member to collect results from the laboratory and staple them into patients’ files.
 - The laboratory technicians demonstrated to the health workers how to collect good blood smear samples in order to have good results and reduce sample rejection.
 - In times of electricity black-outs, the laboratory technicians would still prepare the thick blood smears and then read them immediately when electricity is back.
 - Following a series of skills building and learning sessions, the QI team improved the number of suspected cases of malaria tested with microscopy from 39/120 (33%) in June to 48/75 (64%) in July, to 68/108(79%) in August, and 74/80(92%) in Sept 2016 as shown in **Figure 135**.

Figure 135. Malawi: Percentage of children under age five with suspected severe malaria that had a microscopy done, Mchinji District Hospital (June-Aug 2016)



- **Mwase Village Health Clinic (VHC) under Mkanda HC in Mchinji District** wanted to improve the number of sick children treated at the village clinic catchment area coming in for follow ups from 0-100% within three months (June- Aug 2016) by documenting all the sick children coming for follow-up in the village register. According to IMCI guidelines, all these children with fever/past 48 hours history of fever treated at the village clinics should come for follow-up within three days for reassessment as whether they are getting well or not. Those who are evaluated and found to be still unwell or getting sicker are referred to the health center for further assessment, investigations and treatment. Mwase VHC had a main problem where most children under age five who were treated at the clinic were not coming for follow-up. The change ideas tested included:
 - The health surveillance assistant (HSA) started documenting all the children under age five who came for follow-up visit in the village health register
 - The local leader, a member of the QI team at the village clinic, during routine community meetings sensitized the community members on the importance of sick children to come for review within three days after treatment
- Following the testing of the changes above and coupled with coaching and learning sessions, the number of sick children coming for follow up visits improved from 5/42 (42%) in May to 22/22 (100%) in Sept 2016, as shown in **Figure 136**.

Figure 136. Malawi: Percentage of children under age five with fever treated at the VHC who came for the follow up visit, Mwase VHC (May – Sept 2016)



Activity 5. Application of WHO’s Framework on Integrated People-Centered Health Services (IPCHS) – Phase I

OVERVIEW

ASSIST works with the WHO to apply its Framework on IPCHS in Mali and South Africa. The project is drawing on its partnership with the WHO Service Delivery and Safety (SDS) to promote people-centered care as an essential pillar of quality care.

Mali: ASSIST works in Mali in partnership with the MOH and other partners on the ground to design, implement, and scale-up integrated MNCH and nutrition intervention packages that are centered on the needs of patients and their families and communities. The project contributes to this global people-centered care objective with a pilot demonstration in the Kayes Region through MNCH activities focused on the USAID EPCMD strategy. In five pilot sites in two districts of the Kayes Region (Diéma and Yelimane), ASSIST Mali is partnering with three MOH units to accelerate morbidity and mortality reduction for mothers and babies by improving access, client utilization and satisfaction with essential services during pregnancy, delivery and post-partum care: The National Direction of Health/Division of Reproductive Health, the National Direction of Social Development, and the National Direction of Women, Child and Family Promotion.

South Africa: ASSIST has been working closely with the Department of Health (DOH) in South Africa and its partners to accelerate morbidity and mortality reduction by improving access, client utilization, and satisfaction with essential services in HIV in five provinces. ASSIST has leveraged the principles of the new WHO Framework on IPCHS to strengthen this approach in one district (Nelson Mandela) in Eastern Cape Province, as a pilot for integrated health services focusing on people-centered care. The project is assessing and improving the promotion of the patient-centered approach in clinical consultations by health providers during provision of care to HIV-infected clients

on ART at 10 public health facilities. The facilities chosen for this activity are a mix of primary health clinics, community health centers, and district hospitals.

KEY ACCOMPLISHMENTS AND RESULTS

Mali

- **Provided technical support to provide information about the IPCHS concept to MOH partners at regional and national level** (Oct 2015). The project team conducted four meetings and workshops in Kayes and Bamako (two per zone) to inform and introduce the IPCHS concept with implementing partners at regional level in Kayes and national level in Bamako. As a result, 25 managers of health and social development programs were exposed to the IPCHS concept, principles, objectives, and expected results to strengthen people-centered activities within the existing maternal health program.
- **Provided technical support to finalize the design of the IPCHS pilot with regional team in Kayes** (Oct-Nov 2015). The project team worked with the MOH regional technical health team in Kayes to complete the design of the pilot for the two districts. The draft plan, which was developed with support from ASSIST headquarters and the Regional office was improved upon during this review and finalized to gain consensus on the work plan for the period. The final version was also submitted to national level for feedback and complementary elements.
- **Provided technical assistance to develop IPCHS training and monitoring tools to local context** (Oct 2015). With the commitment of the national, regional and district teams to support the pilot in Kayes, the project team organized two workshops to identify existing tools and adapt them to the local context with the technical support from the WHO consultants, HQ, and regional teams. As a result, a training module with key elements on integrating IPCHS concepts, indicators, and monitoring plan was developed and validated with all partners.
- **The development of research protocol on QI applied to IPCHS** (Oct 2015 – Feb 2016). The project in collaboration with the HQ research team worked on the development of a research protocol on QI applied to IPCHS to be implemented in Yelimané and Diéma. The protocol has been finalized and submitted to HQ for approval. In the meantime, the process of approval by the country ethics team is underway before the implementation within the sites.
- **Conducted baseline survey, wrote report, and used data to target plans for improvement in the targeted districts** (Oct 2015 – Feb 2016). In collaboration with the WHO consultant and Kayes regional team, the project team developed draft questionnaires for the baseline survey in the two districts in accordance with HQ research team recommendations. The baseline was conducted in January.
- **Organized trainings:**
 - **Organized training of trainers on IPCHS** (Nov 2015). With technical support from a WHO consultant and the regional team, the project team organized the training of trainers in Kayes. Participants were from Diéma, Yelimané, and Kayes. The session was facilitated by the WHO consultant and the project team from Bamako. As a result, 21 trainers were trained to facilitate the integration of IPCHS within current activities at maternities in the two districts. During the training the participants developed their plans for IPCHS implementation in their respective district.
 - **Trained providers on IPCHS** (Mar 2016). The training of providers (matrons and nurses) was organized in Diéma for 26 participants (17 women, 9 men) coming from the community health centers included into the pilot study.
 - **Trained stakeholders on IPCHS** (Mar 2016). Stakeholder training in Diéma from multidisciplinary teams working on health issues (social development, women welfare, association of community health centers managers, women leaders, religious leaders) was organized with 28 participants (11 women, 17 men).
 - **Trained remaining providers and actors on IPCHS** (May - June 2016). Fifty people (17 women, 33 men) were trained, including: 12 providers, 25 ASACO members, and 13 community leaders. The level of performance increased from 58% at the pretest to 86% at the post test. The training was facilitated by district coaches and project technical field staff.

- **Discussed with ASSIST gender expert and WHO staff how to integrate gender in IPCHS moving forward** (Mar 2016). Gender will be integrated in trainings and sex-disaggregated data will be collected.
- **Conducted coaching visits to targeted sites in Diéma District** (May – Aug 2016). The purpose was to observe maternity providers during service provision to patients and interview patients after receiving services. Compliance to the norms and standards during service provision was checked, patients were interviewed about their satisfaction with services and providers, and implementation of improvement plans was checked.
- **Convened learning session on IPCHS** (Sept 2016). Twenty-four (24) stakeholders and providers participated in this learning session organized under the leadership of social development department representative in Diéma. Each site presented their tested ideas and progress on improvement plans implementation as well as lessons learned during this processes at community level. As a result, the list of 16 best practices was validated and will be implemented in others sites to continue improvement of activities.

South Africa

- **Baseline and community survey tools reviewed and adopted by the DOH for IPCHS assessments** (Oct 2015). ASSIST staff worked with WHO to develop suitable baseline assessment tools, including a patient interview tool, a provider interview tool, a decision maker interview tool, and a focus group discussion guide.
- **Tested baseline and community survey tools** (Oct 2015).
- **Developed an Excel database for capturing and analysing baseline and community survey data** (Oct 2015).
- **Conducted a baseline assessment at the 10 pilot health facilities** (Nov 2015 – Jan 2016). At least five patients were interviewed at each facility, for a total of 51; 54 providers were interviewed, including professional nurses, counsellors, admin clerks and community health workers; decision makers were interviewed, including facility operational managers, the district PHC manager, provincial PHC manager, district manager, and district program manager. Every patient interviewed was also requested to do a knowledge quiz on basic facts related to HIV. A few patients declined to answer the questions. Four focus group discussions were conducted with a total of 47 community members.
- **Conducted IPCHS CQI training** (Feb 2016). The training workshop was attended by 22 participants including health center managers, hospital managers and district decision makers. Three facilitators from USAID ASSIST and one WHO advisor facilitated the workshop. The training report was compiled by WHO consultant, Shannon Barkley.
- **Baseline feedback provided to Nelson Mandela District management and facility operational managers** (Feb 2016).
- **Established QI teams and developed QI plans at all 10 facilities** (Apr – June 2016).
- **Developed QI plans at all 10 facilities and started implementing QI activities to address problems identified** (Apr – June 2016).
- **Started data collection on outcome indicators** (Apr – June 2016).
- **Conducted CQI support visits for implementation of IPCHS in the 10 pilot sites** (July – Sept 2016). Baseline assessments were conducted in 10 control sites. Facilities documented the improvement process, and eight out of the 10 facilities presented their CQI projects in Sept. during a learning session. PowerPoint presentations and story boards were used. Presentations covered: General information about catchment population, type of facility, and staffing; problems identified during baseline assessment; membership of QI team; improvement activities; challenges; results; and plans for the way forward. Facilities worked on different areas for improvement. Achievements included: establishment of functional QI teams; establishment of functional facility advisory committees in five sites; improvement in TB screening in six facilities; reduced waiting time at four facilities (New Brighton CHC reduced waiting time from 3-4 hours to 1.5 hours); improved use of complaints/suggestion boxes at eight clinics; improved communication on side effects and use of medication at six clinics (Lukhanyo developed a leaflet in three languages on use of medication and side effects, which is provided to each client; Mabandla clinic improved viral load testing for clients on ART from 17% to 64% and the number

of clients tested for HIV at the 10 pilot facilities increased from 1,144 in January to 1,703 in July 2016. The learning session created enthusiasm and pride among participants. Ideas were shared and the two clinics that underperformed came and asked for further support to help them improve.

Activity 6. Governance and Quality: Institutional roles and relationships to ensure service delivery quality - Phases I and II

OVERVIEW

Phase I Overview: ASSIST and HFG are leading efforts to map governance functions essential to ensuring quality. Through a Product Development Roundtable Meeting in March 2016 – which brought together policy makers and implementers to discuss successes, challenges and lessons learned in governing quality of care at the national level – eight “stones” to governing quality of care were identified. These stones are expected to lay the foundation for the work moving forward.

Phase II Overview: Phase II addresses country demand for the institutionalization and sustainability of governance practices. Phase I’s findings as the lessons learned will be applied as well as continue to be developed through technical assistance to country governments in developing and finalizing their national quality policies, strategies and frameworks. During the Product Development Roundtable Meeting, country representatives expressed an interest in participating in a community of practice, which currently includes meeting participants as well as representatives from ASSIST, HFG, and partner organizations: IHI, WHO, HEALTHQUAL International, R4D, and Joint Learning Network.

KEY ACCOMPLISHMENTS AND RESULTS

Phase I

- **Semi-structured interviews with country representatives** (Oct 2015) from Cambodia, Tanzania, Uganda, and South Africa.
- **Key informant interviews with country representatives** (Dec 2015) from Sweden and Scotland conducted by ASSIST.
- **Product Development Roundtable Meeting** (Feb – Mar 2016) held in Dar es Salaam, Tanzania to discuss best practices and lessons learned from governing quality in 11 countries. During this meeting, participants determined eight stones to governing quality of health care. These stones will be the foundation for the final deliverable of Phase I. The stones will be utilized in Phase II to assist us to continue to learn about governing quality.
- **Eight stones to governing quality of health care** (Mar 2016). These stones were identified by meeting participants who discussed priority areas of governance for quality. Although all of these stones are critical to governing quality, they may be prioritized based on context.
- **Participated in the review of the Uganda National Quality Improvement Framework and Strategic Plan and provided feedback, along with IHI** (Apr 2016).
- **Participated in the review the Kenya Quality Model for Health and the Kenya Quality Policy, and aligned them with the Kenya Health Policy** (June 2016).
- **Two community of practice meetings convened** (June & Sept 2016).

8 Stones to Governing Quality of Health Care

1. Governing quality through the use of policies, strategies, and mechanisms
2. Measuring and using quality improvement data
3. Governing to develop a quality improvement culture
4. Using regulatory techniques for governing quality
5. Linking finance to quality
6. Addressing the knowledge gap of quality care at the global, national and local levels
7. Institutionalizing non-state involvement in pursuit of person-centered quality care
8. Garnering political will to pursue quality

- **Publication of report “Institutional Roles and Relationships Governing the Quality of Health Care: Country Experiences, Challenges, and Lessons Learned”** (Sept 2016). See: <https://www.usaidassist.org/resources/institutional-roles-and-relationships-governing-quality-health-care-country-experiences>

Phase II

- **Participated in the review of the Uganda National Quality Improvement Framework and Strategic Plan and provided feedback, along with IHI** (Apr 2016).
- **Held first community of practice meeting** (June 2016).
- **Participated in the review the Kenya Quality Model for Health and the Kenya Quality Policy, and aligned them with the Kenya Health Policy** (June 2016).
- **ASSIST supported and attended the launch of Uganda’s National Quality Improvement Framework and Strategic Plan** (Aug 2016).
- **Documenting of Uganda’s quality improvement journey** (Aug – Sept 2016).

Activity 7. Strengthen internet-based newborn care communities of practice and regional virtual collaborative to reduce hospital newborn sepsis

OVERVIEW

ASSIST has been using internet-based applications to promote quality improvement in the LAC region, including a website to disseminate evidence-based maternal and newborn interventions and communities of practice. As country-level USAID MNCH funding has dwindled in the region, ASSIST had invested modest OHS cross-bureau funds to sustain and grow the LAC regional newborn communities of practice focused on Kangaroo Mother Care and basic newborn resuscitation, essential interventions for two leading causes of newborn mortality—prematurity/low-birth weight and newborn asphyxia. During FY15, ASSIST started the first regional Internet-based improvement collaborative aimed at reducing hospital newborn sepsis through the use of modern improvement methods. The collaborative was concluded in FY16.

KEY ACCOMPLISHMENTS AND RESULTS

- **Newly developed internet-based platform has been effectively used by eleven hospital QI teams from eight countries** (Aug - Dec 2015)
- **QI teams participated in two internet-based learning sessions** (Sept - Nov 2015) using WebEx technology.
- **Four facilitators provided remote support to QI teams** (Aug - Dec 2015) through Skype and phone calls.
- **QI teams measured and reported on baseline indicators for outcome and clinical care processes related to newborn sepsis** (Aug - Dec 2015) through the internet-based platform.
- **Most QI teams concentrated on improving hand-washing processes** (Aug - Dec 2015).
- **Conducted evaluation of a web-based LAC improvement collaborative to prevent neonatal infections in hospitals** (Nov 2015 – June 2016).
 - Conducted 18 telephone interviews with leaders of hospital QI teams (Nov - Dec 2015), both those who continued participating and those who had ceased in their participation, to learn about their experience using the internet for improving care, as well as their suggestions on how to make it work better
 - Conducted one focus group with the four coaches who provided remote support to participating QI teams, to learn about their experience (Dec 2015)
- **Completed activity and developed final report** (April – June 2016).

Activity 8. Develop basic improvement course for the GHeL platform

OVERVIEW

In October 2015, ASSIST launched the Improving Health Care Quality course on the Global Health eLearning platform. The course introduces USAID staff, MOH officials, health care managers, and other global health professionals to principles and approaches of improving health care quality. The

course is openly available at no cost through the Global Health eLearning Center website, which is designed for low bandwidth connections, ensuring accessibility for a wide range of stakeholders.

KEY ACCOMPLISHMENTS AND RESULTS

- **The eLearning course on Improving Health Care Quality was finalized and launched on the GHeL platform** (Oct 2015). It is available at: <https://www.globalhealthlearning.org/course/improving-health-care-quality>. The course was widely promoted (Oct – Nov 2015) on the ASSIST, USAID and Knowledge for Health websites, listservs and social media accounts as well as shared internally for ASSIST staff use and distribution to our partners in the field including MOHs, providers and other implementing partners.
- **As of the end of Sept 2016, the GHeL course has** 1,336 learners representing 96 countries started the course in the reporting period. Of those who started, 811 learners representing 73 countries successfully completed the course. The course has a higher completion rate than other courses launched at the same time.
- **Conducted GHeL Study group** (June 2016) during a two-week period with 95 participants from 29 countries. The study group is an online facilitation discussion which provides a forum for participants to ask questions and get more in-depth understanding of improvement in practice. There were over 80 comments posted from 27 active participants.

Activity 9. Basic improvement course and workbook

OVERVIEW

A critical component to the work of ASSIST is to build competencies for improving health care and social services. This course will focus on initial skills that are necessary for improving care at the point of service delivery through various exercises. The audience for the training will be staff in facilities, host country counterparts, and implementing partners. By the end of the course, a participant will be able to begin an improvement project with mentorship and supervision.

KEY ACCOMPLISHMENTS AND RESULTS

- **Developed draft course workbook, including basic text, draft exercises, and case studies** (Oct – Mar 2015).
- **Revised, reviewed, and field tested five sections of the workbook, preparing them for publication** (May – Sept 2016). An additional four sections were prepared for field testing.

Activity 10. Preservice improvement curriculum (co-funded with OHA)

OVERVIEW

This activity is funded jointly by the USAID OHA and OHS Cross-bureau funds. The goal is to prepare medical professionals to be able to continually review and improve the quality of the services they provide once they are in practice, to improve health outcomes. This activity will serve to develop curriculum materials that could be used with students in various health professions at the participating pre-service training institutions and serve as a model for other pre-service institutions.

KEY ACCOMPLISHMENTS AND RESULTS

- **Held a workshop to meet with the faculty from each university, MOH, and stakeholders** (Nov 2015). This workshop focused on updating participants on improvement and the Kenya MOH approach, the general plan for the activity and progress to date, discussion of the implementation plan, possibilities for integration of improvement, agreeing on the baseline assessment tool and process and initial discussions around M&E for the activity. Though ASSIST had many of these conversations with USAID and the MOH while designing the activity, it became clear that consensus needed to be built by all stakeholders around these points.
 - Of the four universities who signed on to participate, only two (University of Nairobi and Kenya Medical Training College [KMTCC]) were well represented. Moi University faculty could not attend due to a scheduling conflict and Kenya Methodist University (KeMU) sent only one person. During the course of the discussions it became clear that U. Nairobi and KeMU would

not be able to make any adjustments in their curriculums until the next curriculum review cycle in 3+ years. KMTTC was eager to incorporate improvement into their core courses that are taken by all students. KMTTC is the largest training institution in Kenya, so integration in their curriculum would reach the vast majority of health care students. Reports are that Moi University is also interested in immediate integration. As a result, ASSIST will focus its attention primarily on KMTTC and Moi Universities while keeping U. Nairobi and KeMU engaged in the discussions so they can see the possibilities for the future.

- **Conducted data collection for the readiness assessment** (Feb – Mar 2016).
- **Completed faculty sensitization and self-assessment at three institutions** (Apr - June 2016).
- **Held curriculum development workshop with institution representatives, MOH, FUNZO Kenya to develop the preservice improvement module outline** (Aug 2016).

Activity 11. Introduction to improvement course and facilitator's guide

OVERVIEW

This activity is translating the course that orients ASSIST headquarter staff and Chief of Parties to the science of improvement to an online platform, allowing anyone to access the course remotely. The course will be available through a free web-based platform, which can be downloaded to be accessed off-line. It will also be available via CD and USB. The improvement course and corresponding facilitator's guide will be updated on an annual basis and readily available for any and all to use for their own learning purposes or to train others in the basics of improvement.

KEY ACCOMPLISHMENTS AND RESULTS

- **Developed participant guide for improvement course** (Dec 2015 – June 2016). This guide will be provided for participants of the improvement course as well as published on ASSIST's website once the course is ready to be distributed.
- **Tested participant guide** (Jan 2016). The draft participant guide was tested in an internal quality improvement training to get detailed feedback on the utility of the guide. It was further updated after comments and feedback were provided.
- **Finalized course modules** (July 2016).
- **Finalized storyboard narration and images** (Sept 2016).
- **Participant guide translated to French and Spanish** (Sept 2016).

Activity 12. Support quality improvement activity design in USG projects: Course for USG staff and host country government leaders

OVERVIEW

This course is designed for USG staff and host-country leaders responsible for designing, commissioning, and overseeing projects to improve quality of care. The course addresses the fundamentals of the science of improvement and provides an overview of critical functions for effectively governing and supporting improvement programs. The course incorporates strategic approaches for EPCMD.

KEY ACCOMPLISHMENTS AND RESULTS

- **Finalized course material** (May 2016).
- **ASSIST and USAID conducted the course in Dar es Salaam, Tanzania, where 36 participants from organizations including USAID, country MOHs, and UNICEF actively participated** (June 2016).

Activity 13. Quality improvement case book

OVERVIEW

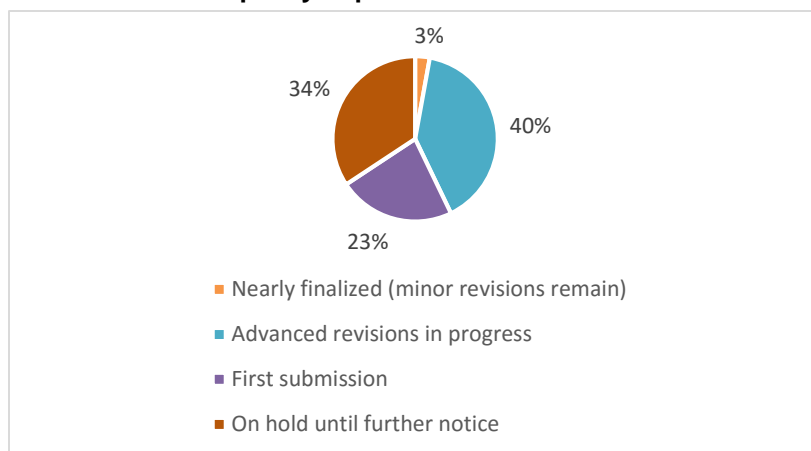
ASSIST staff is working with our AOR, Dr. Jim Heiby, and other USAID counterparts to develop a book to capture decades of experiences from USAID-supported projects to improve health care quality using QI methodology. The field of QI is growing, and many people would be interested in learning about QI through well-written stories based on actual experiences. However, no detailed

descriptions of QI in low-resource settings have been published. Although many health professionals around the world know about good results from QI, few of them know the details of how QI teams do their work. The main audience for these cases are policy makers, academia, and professionals in the field with limited quality improvement practical knowledge. In FY14, the initial call for case study ideas was issued by ASSIST, and 53 preliminary responses were received. In FY15, preliminary responses that were deemed worthwhile to be developed into full cases by the case book Review Team (comprised of USAID Office of Health Systems and USAID ASSIST Project staff) were invited to submit a complete case, based on a detailed guidance developed by the case book review team.

KEY ACCOMPLISHMENTS AND RESULTS

- **Continued detailed review process of 50 case studies for consideration in the book** (Oct 2015 – Sept 2016). Narrowed the case studies considered for review down to 35, and over 40% (15/35) are in an advanced stage of review (**Figure 137**).

Figure 137. Status of quality improvement case book submissions



- **Completed an annotated book outline and prospectus** (July – Sept 2016).

Activity 14. Learning Laboratory for Quality Universal Health Coverage (QUHC)

OVERVIEW

ASSIST is supporting the WHO QHC Unit to design its Global Learning Laboratory (GLL) for Quality Universal Health Coverage (QUHC). Specifically, WHO has requested that ASSIST work in partnership with WHO to provide support in three phases: 1) describe the landscape of global experience with cross-country learning strategies to inform the design of the new GLL; 2) lead a workshop to apply insights from the landscape analysis and inputs from key stakeholders to design the GLL; and 3) follow the development of the LL and take stock of the enablers and constraints experienced in its initial implementation. This activity was approved in late February 2016.

KEY ACCOMPLISHMENTS AND RESULTS

- **Completed landscape analysis of global learning networks** (April - May, 2016). Ms. Lani Marquez, Ms. Kate Fatta, and consultant Dr. Nancy Dixon completed the literature review and in-depth interviews with key informants representing nine global learning networks. The interviews explored eight key attributes of the selected networks: Recruitment/membership; responsibilities/expectations of membership; mechanisms for learning and interaction of members; governance and support; and documentation and products. Informants were also asked what key advice they would offer WHO to consider in the design of the GLL for QUHC based on their experience. The landscape analysis was also informed by interviews with other

stakeholders identified by WHO. The report was submitted to WHO for review in mid-May, prior to the design workshop. Key findings of the literature review are show in **Box 1**.

- **Led a design workshop in Geneva for QHC staff and met with other WHO stakeholders to explore how they will engage with the GLL** (Marquez and Dixon, May 29 - June 3, 2016). Reflecting on the interviews and the literature, we identified 10 issues for the design of the GLL that were discussed during the design workshop, and provided the QHC Unit with written recommendations related to issues discussed:
 - 1) Purpose of the GLL for QUHC: what are you expecting to accomplish
 - 2) Time-boundedness/timeframe for accomplishing this
 - 3) Naming the network
 - 4) Position on the IntegratedCare4People web platform
 - 5) Open versus closed
 - 6) Expectations of participants
 - 7) Recruiting participants
 - 8) Stages of development of the GLL and roll-out of the web pages/topical groups
 - 9) Support/moderation for nurturing participation
 - 10) Monitoring and evaluating the GLL
- **Updated the design of the QUHC GLL knowledge café to be convened at the Health Systems Global Symposium in Vancouver** (July – Sept 2016). The focus is on four areas: policy and strategy, quality interventions for UHC, monitoring and research, and system resilience and security.

Box 1: Success factors for Global Learning Networks

- Core group of engaged members
- Active community leadership
- Leadership that promotes the community externally
- Establishment of trust and motivation to share information
- Setting aside time periodically to review the group's progress and ways of working
- Goal congruence between members and the network
- Find ways to purposefully influence the behavior of others who were not initially a part of the learning network
- Hold formal meetings, either virtually or face-to-face

Activity 15. System strengthening for EPCMD in South Asia

OVERVIEW

The South Asia region accounts for over a third of all neonatal and maternal deaths in the world. While mortality rates are decreasing, they are doing so slowly and new approaches are required to increase the speed of decline and ensure that the health systems are better able to deliver the right care at the right time to prevent further deaths. One of the factors hindering the ability of health care systems in the region to prevent deaths is that they have a very low capacity to use improvement science as a method for problem solving. Improvement science is a management approach used for decades in sectors other than the health sector and is increasingly becoming used within health globally. While it is still underused in South Asia there is strong evidence that it can lead to major change.

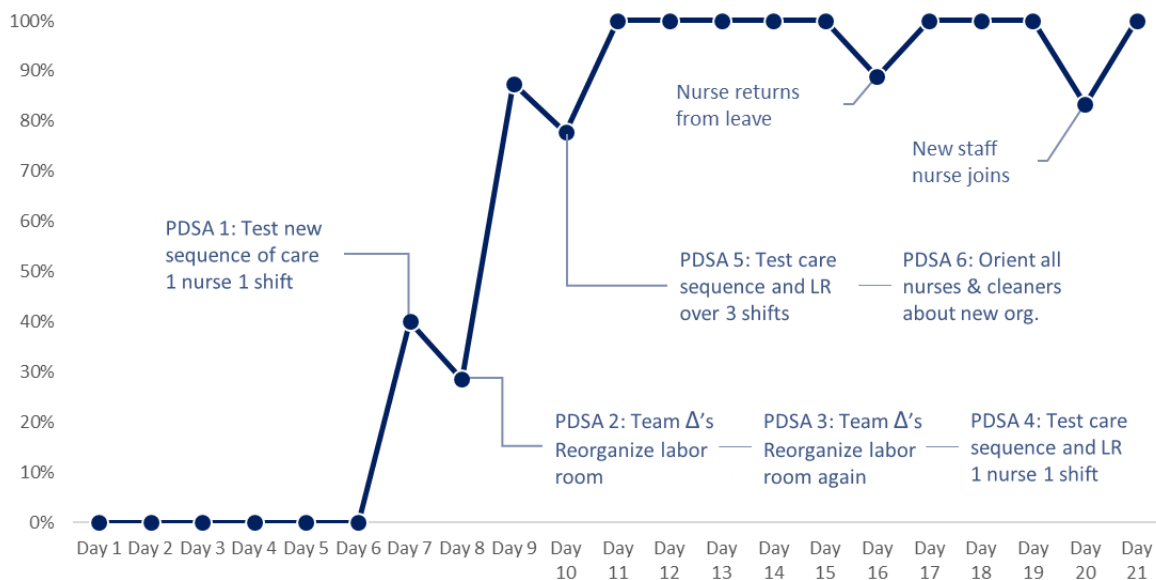
In India, ASSIST has supported over 450 teams in 27 districts providing care to over 180,000 deliveries per year. These facilities have shown a dramatic increase in the delivery of proper care and a 13.7% reduction in neonatal deaths and a 3.1% reduction in stillbirths compared to the 6-month period before they started improvement work. As part of this work, ASSIST has also been working with the All India Institute of Medical Sciences (AIIMS) the leading academic and teaching hospital in the country. We have helped AIIMS set up quality improvement programs in 12 departments of the hospital and trained staff on how to lead and teach QI activities. They are now expanding this work internally and have also been asked to provide support to other institutions within India and in other countries in the region about how to use QI approaches to prevent neonatal deaths. ASSIST is supporting AIIMS to develop the capacity to be regional and eventually global leaders in using QI approaches to prevent maternal and neonatal deaths. In addition, we plan to carefully document the support that we are giving and the results so that others can implement similar activities in other

regions to build local capacity for leading improvement.

KEY ACCOMPLISHMENTS AND RESULTS

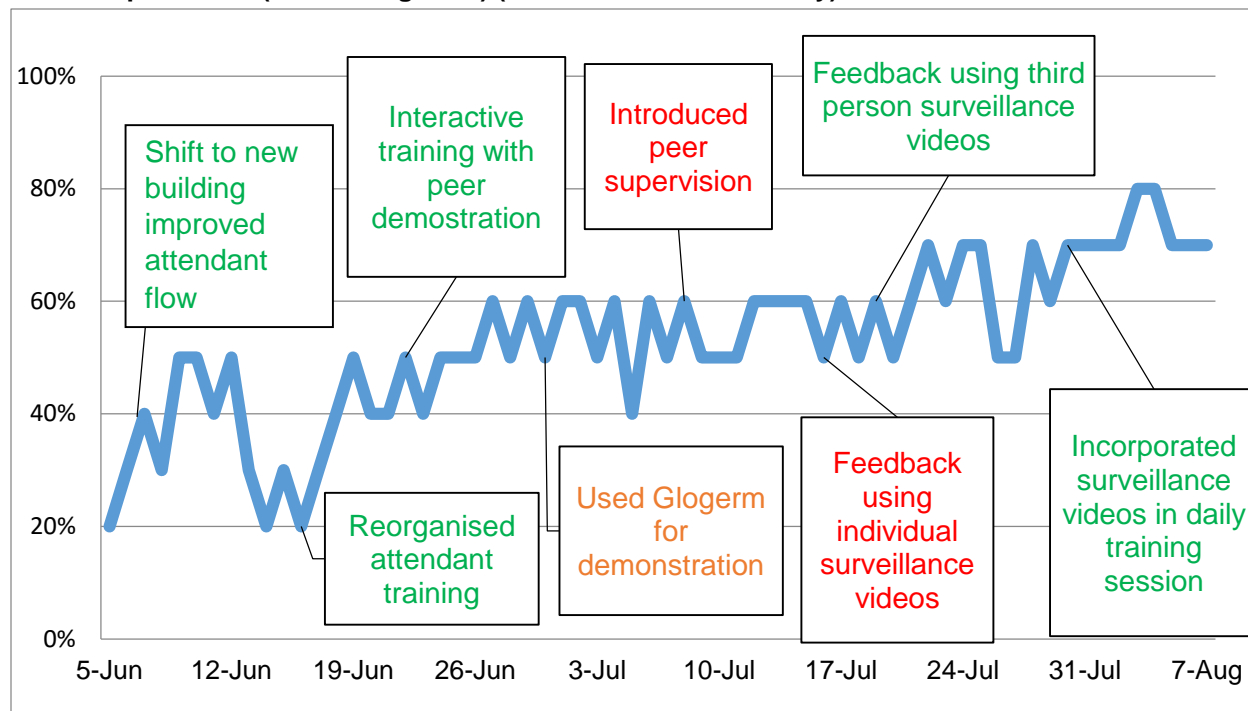
- Developed a QI training package with AIIMS for WHO South East Asia Regional Office (Oct 2015 – Sept 2016).** SEARO asked AIIMS and ASSIST to lead a two-day QI training workshop for staff from large academic hospitals in May 2016. We started working in Q1 with AIIMS to develop a curriculum and facilitators guide for this training. In Q4, we revised and tested the QI curricula in multiple setting within India as well as Bangladesh and Maldives. The package consists of a two-day training program. The first day of the training is based on a hypothetical case scenario of a hospital using QI approaches to prevent post-partum hemorrhage and neonatal hypothermia. Materials include slides, a participants' work book and a facilitators guide. The second day of the training helps providers to plan a QI project for their facility. Materials include QI project template and facilitators guide. The package will also include implementation guides for when the participants return to their facility. A pictorial summary of the case scenario related to neonatal hypothermia is in **Figure 138**.

Figure 138. South East Asia Region: Pictorial summary of case study for QI training in South East Asia -- Percentage of babies receiving immediate skin to skin care



- AIIMS and ASSIST piloted this material in a 10-country meeting** sponsored by SEARO and USAID, a training of 57 nurses and doctors in Northern India and a training of 34 participants from Tanda Medical College in Himachal Pradesh (May 2016).
 - After the WHO-SEARO Quality of Care workshop in May 2016, RML Hospital in Delhi was able to use what they had learned to help family members of sick newborns to improve their hand hygiene before entering the NICU to help care for their babies. The NICU staff formed a QI team to improve hand hygiene practices among family members. From a baseline estimate of around 20 percent of family members complying with hand hygiene standards, the team planned to reach a target of 80 percent over eight weeks by introducing a series of changes. At the end of nine weeks, the QI team met their aim, 80% of family members were following standard hand hygiene practices (see **Figure 139**).

Figure 139. India: Improving hand hygiene in family members looking after sick newborns, RML Hospital NICU (June – Aug 2016) (10 observations each day)



- Provided regional support to use QI approaches to improve care for mothers and babies** (July – Sept 2016). After the initial WHO-SEARO Quality of Care workshop, ASSIST has worked with WHO, UNICEF, and AIIMS to support the spread of QI in Bangladesh and Maldives. WHO Maldives organized a workshop for 34 staff from 17 facilities. Facility staff developed six improvement projects to improve care for newborns. USAID and UNICEF Bangladesh organized a workshop to support staff from five hospitals to develop improvement projects and invited ASSIST staff to participate.

GENDER INTEGRATION

Activity 1: The revised service delivery module of the HSAA manual describes equity as one of the essential health system outputs and one of the three main dimensions of Universal Health Coverage (UHC). Specifically, the module describes equity as the heart of UHC that ensures that the entire population throughout the life-course (including all ages and genders) receives health services when needed. In all health systems, there is significant stratification of risks for ill health and access to and payments for services according to household income, place of residence, gender, and other factors. Without effective measures, there is the risk that poorer, less advantaged segments of the population may not receive health services. Considering the aforementioned, in addition to measuring levels of coverage of essential health services, the revised HSAA service delivery module highlights the importance to disaggregate coverage data by a range of socioeconomic and demographic “stratifiers” and, based on the global UHC Measurement Framework, proposes three primary elements for disaggregation of service coverage data to measure equity in all settings: 1) household income, expenditure, or wealth (coverage of the poorest segment of the population as compared with richer segments); 2) place of residence (rural or urban); and 3) sex.

Depending on the country context and availability of data, the assessment module also suggests additional equity stratifiers, such as age and education.

Activity 4: To overcome any existing gaps in the delivery of febrile illness services we will disaggregate some of the indicators by sex.

Activity 5: Mali: As the direct beneficiaries of this pilot are pregnant women and the outcome of the approach is to center patient concerns in the provision of services, gender-related issues of access

and barriers to services are considered for women. Involvement of male partners is used as a priority strategy to facilitate the integration of the concept within the community and improve social position of pregnant women. Data collected will be disaggregated by sex.

Activity 5: South Africa:

- There were more females (80%) attending PHC services than males (20%), at the 10 pilot sites sampled, but a much higher percentage of males (71%) were on ART compared to females (45%)
- 70% of patients interviewed were female and 30% were male. Amongst providers interviewed, 80% were female and 20% were male.
- At present, we have preliminary data from two focus group discussions that indicate that females have a better experience of care than males, although these data still need to be validated.
- Baseline data show a large gap between males and females on ART, which should be addressed in the future. **Table 25** presents the baseline demographic data, which reflect this.

Table 25. South Africa: IPCHS baseline demographic data (Nov 2015)

<i>South Africa, NMM District: IPCHS Baseline Demographic Data, Nov 2015</i>			
	Male	Female	Total
Sex	10/51 (20%)	41/51 (80%)	51/51 (100%)
Average age	42 years	44 years	43 years
Report to know HIV status	7/10 (70%)	33/41 (80%)	40/51 (78%)
Never tested for HIV	2/10 (20%)	6/41 (15%)	8/51 (16%)
Currently on ART	5/7 (71%)	15/33 (45%)	20/40 (50%)

Activity 11: The participant guide includes examples that use sex-disaggregated data in order to show the importance of disaggregating data by sex to identify gaps between males and females, in order to target improvement changes to address them.

Activity 4: To institutionalize the support provided to Ministry of Health, ASSIST Malawi is working with the National Malaria Control Program (NMCP) at the national as well as the district level to support the targeted 14 teams to improve the diagnosis and care of patients with febrile illnesses at the point of care. At the facility level, the ASSIST Malawi team is supporting the formation of multi-sectoral improvement teams comprising nurses, clinicians, health surveillance assistants, pharmacy technicians, HMIS Officers, and hospital attendants involved in providing any services to patients with febrile illnesses.

Activity 5: Mali: By involving key actors from the three departments in charge of the national health development program, the project is working to set up a basis for institutionalizing this pilot as well possible scale up within other districts. The launch meeting, the design phase, and the development of tools were the important steps where these actors were involved for better ownership and engagement. As of the end of the reporting period, 21 trainers in IPCHS exist in the Kayes Region. They can in the near future be a regional potential for training providers from districts and communities and analyzing their commitment for the integration of IPCHS within their current services. The project team will continue to strengthen their capacity and create a strong link between providers and communities to accomplish objectives related to IPCHS implementation by the end of the fiscal year. National uptake will follow with WHO country representation support.

Activity 5: South Africa: We have involved Nelson Mandela Metro District management during all phases of the project, starting with the planning of the project. The ten pilot facilities were identified by the district management for implementation. The ASSIST work plan was accepted and supported by district management. DOH staff organized dates for baseline assessments and joined USAID ASSIST during the assessment of the first facility. DOH staff were trained on IPCHS and CQI concepts, methodology, and strategies to build capacity and commitment to the project.

Activity 7: In close collaboration with the Avedis Donabedian Foundation from Barcelona, Spain, an

internet-based tool was adapted, in the Spanish language, for QI teams to actively participate in the Improvement Collaborative. QI teams are able to use this web-based platform to upload data and indicators, improvement plans and PDSAs, as well as to consult technical documents and share results. The platform can be adapted for other improvement activity in a different technical area, becoming a sustainable tool.

Activity 15: By working with medical colleges to build their ability to design and lead QI activities we anticipate that they will incorporate QI into training for the next generation of health science students and be able to serve as a resource for the rest of India.

Office of HIV/AIDS-Funded Activities

HEALTH WORKFORCE DEVELOPMENT

BACKGROUND

USAID ASSIST seeks to contribute to improving effectiveness, efficiency, and sustainability of PEPFAR investment in health workforce and community health worker (CHW) programs. The three main activities that have been the focus of ASSIST's work in FY16 are: (1) a study to validate the CHW performance logic model by applying it to examine the performance of CHWs supporting TB/HIV services in Swaziland; (2) a four-country study to develop global policy guidance for the harmonization of CHW programs; and (3) integrating improvement competencies into pre-service education in Kenya. Additionally, ASSIST staff and consultants worked on finalizing and disseminating health knowledge products initiated under earlier work plans on human resources for health in HIV treatment and chronic care. In the third quarter of FY16, ASSIST was asked by the USAID Office of HIV/AIDS to take on three new activities: dissemination of findings from ASSIST work on CHWs (productivity, logic model, harmonization), develop a study of the cost-effectiveness of CHWs dispensing ART, and provide support for a CHW panel at the Health Systems Global Symposium and other CHW dissemination activities.

CHW activities build on previous work conducted by the USAID HCI Project and ASSIST for the USG Evidence Summit on CHW performance. The two studies on CHW performance and policies in Southern Africa are being conducted with the Harvard T. H. Chan School of Public Health (HSPH). The integration of improvement competencies into pre-service curricula in Kenya builds on existing work under PEPFAR with the MOH to develop a national strategy for improvement and prior work funded by USAID East Africa to develop an improvement competency framework.

PROGRAM OVERVIEW

What are we trying to accomplish?	At what scale?
1. CHW performance logic model validation study for Swaziland HIV/TB services	
<ul style="list-style-type: none"> Analyze how different CHW programs in Swaziland achieved intended performance Develop Swaziland CHW case study to determine factors that have been effective in improving services Use findings to inform CHW planning/strategy in Swaziland and inform PEPFAR programming Evaluate validity and content of generic CHW Performance Logic Model 	<ul style="list-style-type: none"> HIV/TB CHW programs in Swaziland with dissemination of findings to PEPFAR countries and others
2. CHW harmonization study in Southern Africa	
<ul style="list-style-type: none"> Develop and publish policy recommendations for harmonization of HIV community cadres and programs into national CHW programs and plans targeted to decision makers at country level 	<ul style="list-style-type: none"> HIV/TB CHW programs in Swaziland, Lesotho, Mozambique, and South Africa

What are we trying to accomplish?	At what scale?
3. Pre-service improvement curriculum	
<ul style="list-style-type: none"> Build competencies of health care professionals to continually improve the quality of the services they provide in order to improve health outcomes 	<ul style="list-style-type: none"> 2 pre-service medical training institutions in Kenya (Kenya Medical Training College, Moi University)
4. Finalize and disseminate knowledge products from earlier work plans	
<ul style="list-style-type: none"> Finalize and disseminate 5 deliverables that were funded under earlier work plans: journal article on VHT productivity in Uganda; synthesis paper on improving health worker performance; final report of Tanzania district health management intervention; journal article on in-service training improvement framework; and revisions to the Tanzania health worker engagement study manuscript 	<ul style="list-style-type: none"> Global learning
5. Dissemination of findings: ASSIST work on CHWs (logic model and harmonization)	
<ul style="list-style-type: none"> Disseminate findings from a series of ASSIST papers on CHWs (productivity, performance logic model, harmonization) 	<ul style="list-style-type: none"> The webinar will include findings from a series of papers produced by ASSIST, including work completed in Uganda, Swaziland, South Africa, Mozambique, and Lesotho
6. Cost-effectiveness of CHWs dispensing ART	
<ul style="list-style-type: none"> Determine the relative cost-effectiveness of different models of CHWs delivering ART services to patients with HIV 	<ul style="list-style-type: none"> CHW performance logic model validation study for Swaziland HIV/TB services Analyze how different CHW programs in Swaziland achieved intended performance Develop Swaziland CHW case study to determine factors that have been effective in improving services Use findings to inform CHW planning/strategy in Swaziland and inform PEPF
7. Disseminate findings from a series of ASSIST papers on CHWs (productivity, performance logic model, harmonization)	
<ul style="list-style-type: none"> Support the attendance of one of the proposed panelists in the Health Systems Global symposium (Vancouver), November 2016 Present a webinar on Sustaining CHW Programs in the HIV Response: Lessons Learned from the United States 	<ul style="list-style-type: none"> Ms. Brendaly Rodriquez, President, Florida CHW Coalition, USA will serve as a panelist at the HRH TWG session In collaboration with Initiatives Inc. and CHW Central, ASSIST will organize a global webinar to share lessons from US experience with CHW associations



Cross-cutting Activity

Activity 1. CHW performance logic model validation study for Swaziland HIV/TB services

OVERVIEW

Under HCI funding, a CHW performance logic model was developed to guide efforts to improve CHW program performance. A study is now underway in Swaziland to determine if this model has validity for CHWs involved in TB/HIV service provision.

KEY ACCOMPLISHMENTS AND RESULTS

- **The study was completed and a draft paper developed and submitted to USAID for comment** (June 15, 2016).
- **HSPH completed a second draft of the report of validation of the CHW performance logic model addressing comments by USAID OHA.** The HSPH team also produced a slide deck presenting the key findings of the Swaziland logic model study (Aug 2016).
- **The final products from the study were submitted to URC** (Sept 2016)

Activity 2. CHW harmonization study in Southern Africa

OVERVIEW

This activity builds on the work done by ASSIST in 2013 with USAID and the Global Health Workforce Alliance in publishing a monitoring and accountability platform for CHW programs by developing policy guidance for the harmonization of CHW programs based on multi-country case studies. The USAID Missions in Swaziland, Lesotho, Mozambique, and South Africa agreed to participate in the study.

KEY ACCOMPLISHMENTS AND RESULTS

- **Completed interviews in all four countries** (May 2016).
- **Circulated three of four case study drafts for comments by URC/USAID** (June 30, 2016). They include both country-specific and overarching findings for all countries.
- **Completed data analysis for all four countries** (July 2016).
- **Completed slide deck and submitted to USAID OHA for review** (Aug 2016).
- **Manuscript for peer-reviewed publication on the four country case studies was drafted** (Sept 2016).

Activity 3. Pre-service improvement curriculum

OVERVIEW

This activity is funded jointly by the USAID Office of HIV/AIDS (OHA) and Office of Health Systems (OHS) Cross-bureau funds. The goal of this activity is to prepare medical professionals to be able to continually review and improve the quality of the services they provide once they are in practice to improve health outcomes, with a focus on HIV services in two Kenyan medical training institutions.

KEY ACCOMPLISHMENTS AND RESULTS

- **ASSIST held a workshop to meet with the faculty from each university, MOH, and other stakeholders, such as professional organizations** (Nov 2015).
- **Held Technical Working Group meeting to finalize the readiness assessment tool and make a plan for data collection** (Jan 2016).
- **Collected data for the readiness assessment** (Feb – March 2016).
- **Held curriculum development workshop with institution representatives, MOH, FUNZO Kenya to develop the preservice improvement module outline** (Aug 2016).

Activity 4. Finalize and disseminate knowledge products from earlier work plans

OVERVIEW

ASSIST is finalizing five deliverables that were initiated under previous work plans: two project technical reports and three articles for peer-reviewed publication.

KEY ACCOMPLISHMENTS AND RESULTS

- **Journal article (for submission to the *Human Resources for Health Journal*) on the in-service training improvement framework** submitted to USAID (Nov 2015). Based on comments received from USAID (Feb 2016), the manuscript was revised and resubmitted to USAID OHA for final approval (July 2016).
- **Tanzania district management improvement intervention final report was published** (Aug 2016).
- **Uganda VHT productivity manuscript:** Consultant completed revisions requested by OHA (Sept 2016).
- **Synthesis document on lessons from collaborative improvement interventions for strengthening health worker performance:** Revised paper submitted to OHA (July). Lani Marquez discussed additional revisions to the July version of the paper with Adrienne Hurst and Diana Frymus (Sept 2016).
- **Consultant hired to re-analyze the Tanzania health worker engagement data set** following comments received from reviewers (June 2016). Preliminary analysis was completed (Sept 2016).

Activity 5. Dissemination of findings: ASSIST work on CHWs (logic model and harmonization)

OVERVIEW

In partnership with a team at the Harvard T. H. Chan School of Public Health, ASSIST is working to disseminate the findings of the CHW logic model study and CHW four-country harmonization case study. USAID OHA has requested that a global webinar be organized by ASSIST to present findings from several CHW studies (including the Uganda VHT study).

KEY ACCOMPLISHMENTS AND RESULTS

- **Poster presentation at the International AIDS Society Conference in Durban** (July 2016), titled “The social acceptability of community health worker-led HIV testing: Evidence from a mixed methods study in Swaziland.”
- **The HSPH team has commenced work on a manuscript on the 4-country harmonization case study for possible submission for publication with USAID approval** (Sept 2016).
- **The HSPH team drafted a manuscript for possible submission for publication with USAID approval** (Sept 2016).

Activity 6. Cost-effectiveness of CHWs dispensing ART

OVERVIEW

ASSIST is planning to conduct the cost-effectiveness study in a PEPFAR focus country to be determined. The study will likely compare different models of community-based delivery of HIV services, specifically for those on ART. The specific details of this activity – the country setting, the cadres of CHWs involved and nature of the economic analysis – are yet to be determined.

KEY ACCOMPLISHMENTS AND RESULTS

- **Concept note finalized and USAID sent it around to missions in sub-Saharan Africa to gauge their interest** (Aug 2016).
- **Discussions were held with USAID on possible settings in which to conduct the study** (July – Sept 2016).

Activity 7. Disseminate findings from a series of ASSIST papers on CHWs (productivity, performance logic model, harmonization)

OVERVIEW

The importance of CHWs in addressing health needs in the face of health workforce shortages must form a large part in planning, organizing and financing health systems in LMICs. The Health Systems Research Symposium is a key venue to disseminate the work on HWF/CHW research and

investment by USAID therefore ASSIST will support the Health Systems Global CHW TWG that USAID co-chairs. USAID is also interested in learning from experiences with CHWs in other settings, particularly the US domestic setting. It would be beneficial to ASSIST to work with partners, Initiatives, to develop a webinar panel discussion on the topic.

KEY ACCOMPLISHMENTS AND RESULTS

- **Discussions initiated with OHA and Initiatives Inc. for CHW webinar** (Sept 2016): Several conference calls were held between Shayanne Martin and Ms. Frymus of OHA, Donna Bjerregaard of Initiatives, Inc., and Ms. Marquez and Sarah Kauder of ASSIST to discuss the scope of work for a CHW webinar, to be held in November.
- **Participation of Brendaly Rodriguez in OHA-sponsored HRH panel at HSR Global** (July 2016): At OHA request, Ms. Brendaly Rodriguez was registered for the HSR Global Symposium and her travel arranged.

GENDER INTEGRATION

It was not possible for HSPH to carry out a sex-disaggregated analysis of CHW cadres in Swaziland.

SUSTAINABILITY AND INSTITUTIONALIZATION

Achieving the 90-90-90 goals will require the efficient use of available resources, and new models of service delivery that maintain long-term health among people with HIV. CHWs will likely play important roles in extending HIV/AIDS services, maintaining people on treatment, and improving linkages between those who need care and those who can provide it. Support needs of community-based cadres differ from those of more formalized health worker cadres. Addressing these needs is integral to ensuring sustainability of PEPFAR-supported community-based cadres and programs that utilize and rely on them to ensure the HIV continuum of response. Building improvement competencies into pre-service curricula will create ongoing systems for preparing health care workers to continually improve the care they are providing once they are in active service. This is a more sustainable approach than relying solely on in-service training.

HIV AND AIDS: CHRONIC CARE, TREATMENT, AND PREVENTION

BACKGROUND

The USAID ASSIST Project is implementing various areas of HIV programming through core funding from the USAID Office of HIV/AIDS (OHA). In FY15, ASSIST began piloting an improvement approach to injection safety and waste management in Swaziland. During FY16, ASSIST worked to complete an end-line evaluation and disseminate the findings of this activity. In FY16, ASSIST also worked to support activities to improve voluntary male circumcision (VMMC) services in Uganda and South Africa. In Uganda, ASSIST worked to support the MOH to carry out a study on mitigating VMMC-related tetanus risk, while gaining experience that can be transferred to other countries. From our office in South Africa, the ASSIST country team provided technical support to improve VMMC services in Tanzania, Malawi, Namibia, and Mozambique.

To further support USAID's VMMC activities, in FY16 ASSIST implemented two core-funded activities that support global learning and knowledge management goals. Firstly, we worked to develop and disseminate a mobile external quality assessment (EQA) tool. As part of this activity, we also supported USAID as it conducted EQA visits. Secondly, we worked to develop a comprehensive continuous quality improvement (CQI) toolkit to publish on the ASSIST website and related knowledge management platforms, like the AIDSFree website. This toolkit draws extensively on our work in Uganda, South Africa, Tanzania, and Malawi.

Additional core VMMC funds received in FY16 were used to build the capacity of USG staff in conducting EQAs and supporting CQI through a training workshop and to develop a collection of manuscripts for publication in 2017 on scaling up CQI in VMMC. These activities will continue into FY17.

Additionally, USAID has identified a critical need to improve the process of HIV testing and counseling (HTC) so that it is conducted in accordance with national protocols and guidelines, and so that ultimately all clients are likely to get correct test results. ASSIST employed a quality improvement

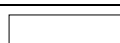
approach, using a tested gap analysis framework to improve the process of care as well as close identified gaps in quality so that patients are more likely to receive correct test results from point-of-care (POC) testing.

Finally, ASSIST worked to finalize five deliverables that were initiated in earlier work plans. We also employed our existing knowledge management platforms to disseminate these materials for broader utilization in the field and within the countries in which we work.

PROGRAM OVERVIEW

What are we trying to accomplish?	At what scale?
1. Improving injection safety in Swaziland	
1.1 Apply quality improvement (QI) principles to improve injection safety and waste management practices to reduce the transmission of blood-borne infections such as HIV, Hepatitis B and Hepatitis C (Swaziland implementation)	
<ul style="list-style-type: none"> • Reduce % of providers experiencing needle-stick injuries • Increase % of observed injections in which safe practices were performed • Implement proper health care waste management practices. 	20 intervention sites, all 4 regions of Swaziland
1.2 Evaluating the impact of improved injection safety and waste management practices- including aspects associated with stigma and discrimination- on health worker engagement and contribution to patient outcomes	
<ul style="list-style-type: none"> • Study the impact of improved injection safety and waste management practices on health worker engagement and contribution to patient outcomes. 	20 intervention sites, 12 control sites
2. Integrating CQI in VMMC in Uganda: Tetanus Mitigation Study	
<ul style="list-style-type: none"> • Support the MOH to conduct a study to understand integration of tetanus vaccine into VMMC in Uganda 	19 sites, in all geographical regions of the country
3. Integrate CQI for VMMC activities in South Africa	
<ul style="list-style-type: none"> • Improve the quality and safety of VMMC services by applying quality improvement methodology and tools • Engage the DOH at the national and provincial level through their participation in learning sessions 	9 provinces
4. Develop a VMMC EQA mobile application and support USG EQA visits in 7 PEPFAR-supported countries	
<ul style="list-style-type: none"> • Develop, pilot test, and utilize a VMMC external quality assessment mobile application • Support USG assessment teams in 7 countries to implement quarterly VMMC external quality assessments 	7 countries
5. Develop and disseminate a web-based VMMC CQI toolkit	
<ul style="list-style-type: none"> • Develop an online suite of tools to support VMMC CQI • Coordinate communication between ASSIST field teams working on VMMC and USAID, and host/participate in dissemination activities including webinars, presentations, and meetings 	Global learning
6. Improve the quality of point-of-care HIV testing and counseling in Kenya	
<ul style="list-style-type: none"> • Improve the process of care so that patients are more likely to receive correct test results from POC rapid HIV tests • Conduct a pre- and post-test evaluation 	9 public health care facilities in Busia county, Kenya

What are we trying to accomplish?	At what scale?
7. Finalize and disseminate deliverables from previous work plans	
<ul style="list-style-type: none"> Finalize and disseminate five deliverables funded under earlier work plans 	Global learning
8. Capacity Building for USG & IP staff in VMMC EQA & CQI	
<ul style="list-style-type: none"> Develop the capacity of USAID and IP staff in quality improvement through training and the development and dissemination of coaching guides and tools 	TBD
9. Dissemination of lessons learned to support scale-up of VMMC CQI	
<ul style="list-style-type: none"> Facilitate the scale-up of VMMC CQI in other countries through the sharing of training materials, case studies, learning events, webinars and country visits 	Global Learning
10. Integrate CQI for VMMC in Mozambique	
<ul style="list-style-type: none"> Provide CQI technical assistance to USAID-supported sites in collaboration with AIDSFree and HC3 	8 sites in two provinces



Improvement Activity



Cross-cutting Activity

Activity 1. Improving injection safety in Swaziland

OVERVIEW

The injection safety activity has two components: 1) **Implementation**: Improving injection safety and waste management to reduce the transmission of blood borne infections such as HIV, Hepatitis B, and Hepatitis C; and 2) **Impact Assessment**: Evaluating the impact of improved injection safety and waste management practices - including aspects associated with stigma and discrimination - on health worker engagement and contribution to patient outcomes.

KEY ACCOMPLISHMENTS AND RESULTS

- Advocacy for policy pre-employment/licensing Hepatitis B vaccination (HBV) for nurses (Q1-2)**: The Professional Deputy Secretary and Industrial Deputy President for the Nurses Association met in Q1 to finalize the pre-employment HBV requirement, which was shared and approved. In Q2, the Nurses Association met with the MOH to communicate this change in support of health care worker safety. This fostered the importance of vaccination in training institutions so that no nurse is recruited and given a license to practice professionally without a completed HBV course certificate unless otherwise medically advised not to.
- Provided technical assistance (TA) for the development of the health care waste management (HCWM) training manual (Nov 2015)**. The course content was presented by Edward Krisiunas, Health Care Waste Management Consultant, President of WNNW (Waste Not, Want Not) working with the Environmental Department. The manual guides basic training for health care workers in HCWM to implement the national guidelines for safe management of health care waste and to prepare health care workers to take steps to ensure a healthy and safe environment in facilities and communities. The material was piloted for the first time in a weeklong training of trainers (TOT) training in Piggs Peak before its national roll-out.
- Facilitated the printing of waste collection consignment certificate registers (Nov 2015)**. These certificates will be used when transporting waste between and within health care facilities. The consignment note and certificates should accompany the waste from its place of production to the site of final disposal. Handling and disposal facilities should hold a permit, issued by a waste regulation authority, allowing the facilities to handle and dispose of health care waste. These instruments facilitate and enforce regulation and transportation of waste in Swaziland.
- Revised endline study proposal, in collaboration with ASSIST headquarters (Oct- Dec 2015)**. Approval was received from the Swaziland Ministry of Health Scientific and Ethics Committee for the revised proposal (Dec 2015).

- **Endline data collection completed** (Feb – June 2016). The end line data collection started in February 2016 in 20 intervention sites and 12 control sites. Data collection was completed in June.
- **Held orientation workshops of regions and dissemination of health care waste management and disposal tools** (May 2016).
- **Evaluation report drafted** (August 2016). The report has been shared with USAID for review.

Activity 2. Integrating CQI in VMMC in Uganda: Tetanus Mitigation Study

OVERVIEW

To date, nine cases of tetanus, five of which were fatal, have been confirmed in Uganda. It is believed that the problem of tetanus may not be limited to Uganda alone but also be present in other countries. WHO has recommended vaccination of clients prior to circumcision; Uganda will be the first country to pilot this recommendation. In FY16, ASSIST is channeling all core-funded Uganda VMMC CQI resources to support the MOH of Uganda and VMMC implementing partners to support a MOH-led study on tetanus vaccination. The overall objective of the study is to generate information needed to develop a national policy on integration of TTCV in the VMMC program in Uganda. ASSIST is supporting data collection, analysis, report writing, and dissemination activities. All laboratory work including the lab supplies is supported by Rakai Health Science Program. After completion of the study, the MOH and ASSIST will support IPs and sites to integrate the recommendations of the study in VMMC services.

KEY ACCOMPLISHMENTS AND RESULTS

- **Developed study protocol** (Q1). ASSIST supported the MOH to write a study protocol titled, "Evaluation of the Tetanus Vaccination Schedule and Antibody Responses Following Tetanus Toxoid Administration among Clients Seeking Safe Male Circumcision Services in Uganda". The study has five objectives:
 1. Determine the rate of change of anti-TTV specific antibody concentrations by day 14, 28, and 42 following booster shots on day 0 and day 28.
 2. Determine the sero-prevalence of protective anti-TTV specific antibody concentrations among males aged 10-49 years seeking safe male circumcision (SMC) services.
 3. Understand wound care practices among SMC clients.
 4. Determine the feasibility of tetanus vaccination before SMC service provision, clients' understanding of TT vaccination and SMC messages, TT vaccination completion rate (client return rates), and uptake of circumcision following vaccination
 5. Explore the mechanism of data capture for monitoring and evaluation and inclusion in the national health system.
- **The study received approval from IRB (October 28, 2015) at Makerere University College of Health Science and from the Uganda National Council for Science and Technology** (Jan11, 2016).
- **Data collection tools were finalized and shared with all the sites** (Jan 2016). **The teams were oriented on how to complete the tools** (Feb 2016). Site and eligible patient enrollment began in March 2016.
- **Completed enrollment of study volunteers** (Sept 2016). Double data entry is ongoing and will be completed soon. Results are anticipated in the first quarter of FY17.

Activity 3. Integrate CQI for VMMC activities in South Africa

OVERVIEW

To build sustainable quality improvement practices over time, USAID ASSIST South Africa is working to fully integrate quality improvement practices into the national HIV/AIDS program, while supporting the development of leadership capacity at the national and provincial level. USAID ASSIST will document this process to share our experience with other countries, and to support USAID ASSIST's Global Learning goals.

KEY ACCOMPLISHMENTS AND RESULTS

- **Developed terms of reference and participated in VMMC Technical Working Groups** at provincial level – in Mpumalanga province (Feb - March 2016).
- **Conducted five CQI trainings in four provinces** for a total of 222 participants including VMMC QA managers, coordinators, health providers, and IPs (Oct 2015-March 2016).

Activity 4. Develop a VMMC EQA mobile application and support USG EQA visits in 7 PEPFAR-supported countries

OVERVIEW

Development of a mobile application will allow for real-time collection and analysis of data from EQA visits. When fully implemented, the mobile application will permit targeted assessments of the efficacy and quality of VMMC services, foster more rapid feedback, and facilitate timely action planning. Results of the pilot test in Zimbabwe demonstrated that the mobile application does support rapid feedback to VMMC field teams: a draft report from the EQA visit was available and ready for review/approval just two weeks after the EQA site visits, a vast improvement on previous EQA visits.

KEY ACCOMPLISHMENTS AND RESULTS

- **The VMMC CQI mobile application has first used to support a USAID-led EQA mission to Swaziland** (Oct 2015). Based on that experience, the mobile app, known as VMMC Qual, was refined for application in Zimbabwe (Dec 2015).
- **Further tested VMMC CQI mobile application as part of joint EQA/SIMS visits to five sites in Lesotho** (Jan 18- 22, 2016) **and 12 sites in Tanzania** (Jan 25- Feb 4, 2016). The assessment visits were conducted in collaboration with staff from USAID missions (US and country level), MOH, and implementing partners.
- **Continued enhancements to the VMMC EQA app** in response to USAID requests, including automatic report generation, display of SIMS results, and further development of the site productivity analysis tool (July-August 2016). See **Figure 140** for an excerpt of the productivity analysis tool.

Figure 140: Excerpt from VMMC site productivity analysis tool

Site performance																							
VMMC Done			Productivity Index				Utilization Rate	48 Hours, 7 Days and 6 Weeks Clients follow Up						Adverse Events					HIV Testing				
Annual	Done vs Target	Daily	Annual Current	Annual Optimum	Daily Current	Daily optimum		48 Hours	Rate	7 days	Rate	6 Weeks	Rate	Mild	Rate	Moderate	Rate	Severe	Rate	HIV Tests	Rate	HIV-positive tests	Rate
7 035	117%	28	1 955	1 955	8	8	138%	5 701	81%	3 908	56%	911	13%	-	0,00%	2	0,04%	-	0,00%	6 406	91%	141	2,20%
5 848	88%	23	(1 802)	(1 802)	(7)	(7)	76%	3 887	66%	3 819	65%	-	0%	-	0,00%	1	0,03%	-	0,00%	4 004	68%	9	0,22%
4 013	62%	16	1 463	(3 637)	6	(14)	52%	2 744	68%	2 251	56%	2 602	65%	-	0,00%	6	0,22%	1	0,04%	3 434	86%	17	0,50%
5 683	131%	22	(1 967)	(1 967)	(8)	(8)	74%	2 343	41%	2 401	42%	396	7%	-	0,00%	18	0,77%	-	0,00%	5 098	90%	47	0,92%
7 370	53%	29	(280)	(2 830)	(1)	(11)	72%	3 768	51%	2 096	28%	234	3%	-	0,00%	29	0,77%	-	0,00%	6 002	81%	58	0,97%
2 891	#DIV/0!	11	341	(7 309)	1	(29)	28%	1 801	62%	939	32%	101	3%	-	0,00%	3	0,17%	-	0,00%	2 624	91%	8	0,30%
1 714	14%		(836)	(5 936)	(10)	(30)	22%	361	21%	86	5%	22	1%	-	0,00%	-	0,00%	-	0,00%	696	41%	5	0,72%
2 880	34%	11	(2 200)	(2 200)	(9)	(9)	57%	2 714	94%	2 430	84%	345	12%	-	0,00%	-	0,00%	-	0,00%	2 615	91%	25	0,96%

- **Participated in the EQA of four USAID-supported sites in Manica and Tete provinces of Mozambique** (Dikgale, Masina, Byabagambi, Marquez) (Aug 2016). Four ASSIST staff and partner Moyatech conducted the EQAs, producing a master slide deck for presentation of the

findings, a full draft of the country report in one week, and draft site level reports. Productivity analysis has become a major part of the EQA tools and figured prominently in the Mozambique EQA report (September 2016).

- **Developed EQA country and site-level reports for internal discussion within USAID:**
 - Swaziland – 4 site reports and 1 overall report (Nov. 2015)
 - Zimbabwe – 5 site reports and 1 overall report (Jan. 2016)
 - Lesotho – 4 site reports and 1 overall report (Mar. 2016)
 - Tanzania – 12 site reports and 1 overall report (Apr. 2016)
 - Mozambique – 4 site reports and 1 overall report (Sept. 2016)

Activity 5. Develop and disseminate a web-based VMMC CQI toolkit

OVERVIEW

ASSIST is in the process of developing a web-based toolkit of standardized tools and tested procedures to allow for more rapid and efficient start-up of CQI in VMMC programs. The web-based VMMC CQI toolkit will draw on ASSIST's work in Uganda, South Africa, Malawi, Tanzania, and other countries. Hosted on the USAID ASSIST website with links to other USAID-supported platforms, such as the AIDSFree website, for broader dissemination, the VMMC CQI toolkit will offer a suite of tools to support the roll-out of CQI in VMMC programming. It will showcase successful examples of describing how various implementing partners have applied QI approaches to increase the safety of VMMC procedures and reduce adverse events. We will promote the toolkit through webinars, presentations at international conferences and other events, and social media. This activity also supports a range of activities that ASSIST does to disseminate our work on quality improvement for VMMC, including VMMC partners' meetings and conferences.

KEY ACCOMPLISHMENTS AND RESULTS

- **ASSIST started gathering and organizing materials from relevant ASSIST country teams for potential inclusion in the toolkit (Q2).**
- **Hosted a USAID OHA VMMC HQ Partners Meeting (Jan 13, 2016).**
- **Developed detailed structure and determined content for the web-based VMMC CQI toolkit,** to include the section, sub-pages, key points on page text, and the files and links that will be provided on each sub-page (June 2016).
- **Conducted briefings and webinar on VMMC CQI (June 2016).** Dr. Donna Jacobs of URC/ASSIST South Africa and Dr. John Byabagambi of URC/ASSIST Uganda traveled to the U.S. to present a ASSIST brownbag session at USAID Global Health Bureau entitled "Voluntary Medical Male Circumcision Quality Assurance and Improvement in East and Southern Africa: Lessons for Other Countries and Programs"; an ASSIST webinar to USG field staff, IPs, VMMC program managers, etc. entitled "What's New in Scaling Up Continuous Quality Improvement for Voluntary Medical Male Circumcision;" and present at the OHA VMMC HQ Partners Meetings hosted by AIDSFree.
- **Developed content for the toolkit, completing drafts of major sections (July – Sept 2016),** which include stages in CQI roll-out, special issues in VMMC CQI, change ideas and common solutions, and case studies.
- **Sponsored a satellite session at the 21st International AIDS Conference (AIDS 2016) in Durban, South Africa** entitled "Voluntary Medical Male Circumcision Quality Assurance and Quality Improvement: Lessons Learned from East and Southern Africa" (July 21, 2016). The session was co-chaired by Dr. Yogan Pillay of the NDOH, South Africa and Dr. Emmanuel Njehumeli of USAID Washington, and featured presentations by URC staff, screening of a documentary film on South Africa's journey to improve the quality of VMMC services, and panel discussion on scaling up and sustaining quality VMMC programs with stakeholders from the MOH of Uganda, Mpumalanga Provincial DOH, South Africa; a private sector provider from South Africa; and an implementing partner from South Africa.

Activity 6. Improve the quality of point-of-care HIV testing and counseling in Kenya

OVERVIEW

USAID has identified a critical need to improve the process of care so that HIV tests are conducted in accordance with national protocols and guidelines. HTC services have been scaled up rapidly to make testing more available in PEPFAR-supported countries, and many people now have increased access to HIV tests. Currently, the advent of test-and-treat approaches places quality concerns front-and-center, because patients are now being put on ART often based solely on point-of-care (POC) rapid tests. In particular, many are concerned about Option B+, because misdiagnoses of pregnant women (false positives) result in unnecessary treatment that places them and their babies at risk of adverse events.

USAID ASSIST will employ a quality improvement approach to develop a CQI package to improve the quality of HIV POC testing. Initially, South Africa was considered as the location for this activity, but after further consideration, Kenya is now proposed as the country of implementation. It is proposed that ASSIST implement the activity jointly with AMPATH Plus, a USAID service delivery implementing partner, in 11 directly supported high HIV prevalence sites in Kenya. It is expected that this activity will be completed by Q4 of FY17.

KEY ACCOMPLISHMENTS AND RESULTS

- **A revised scope of work was submitted to USAID Office of HIV/AIDS (OHA)** (April 2016)
- **Engaged in initial briefings and meetings with NASCOP and USAID/Kenya** (Sept 2016)
- **Submitted revised and further detailed improvement plan to USAID based on feedback from previous submission** (Sept 2016)
- **Determined by NASCOP to proceed without IRB approval** (Sept 2016)

Activity 7. Finalize and disseminate deliverables from previous work plans

OVERVIEW

ASSIST has been working on finishing five deliverables that were funded in previous work plans. In consultation with USAID, ASSIST will also disseminate these knowledge products using our existing platforms for information sharing. The pending products are:

- Report on community chronic care work in Uganda
- Patient self-management guide
- Uganda chronic care intervention final report and tools (including case study)
- Mali injection safety final report in English and French
- Tanzania AIMGAPS final report

KEY ACCOMPLISHMENTS AND RESULTS

- **Uganda community chronic care:** During a TDY for another activity, in November, Ms. Kate Fatta from the ASSIST knowledge management team worked with Mabel Namwabira from Uganda in Kampala to fill in most of the documentation of the community chronic care intervention and final change package. A full draft of the report was completed in February 2016.
- **Uganda chronic care cost-effectiveness analysis report:** A manuscript detailing the key findings was submitted to the *International Journal of Quality in Health Care* in January; revisions requested by peer reviewers were submitted to the journal in June. The article, "Cost-effectiveness of implementing the chronic care model for HIV care in Uganda", was published in September and can be accessed at: <http://intqhc.oxfordjournals.org/content/early/2016/09/21/intqhc.mzw116>. The full report on the cost-effectiveness analysis of the Uganda chronic care intervention was completed in Q2 and published on the ASSIST website.
- **Tanzania AIMGAPS:** Due to difficulties in sending HQ staff to Tanzania to support completion of this activity's products, previously separate products (manuscript and technical report) were combined into a single technical report. Additional information was received in December from Dr. Betty Hizza, and Dr. Sarah Lunsford has begun integrating the qualitative findings into the

single report. Ms. Fatta traveled to Tanzania in March to continue work on the report with Dr. Hizza. A revised version of the report was sent to Tanzania in August for final review.

Activity 8. Capacity Building for USG & IP staff in VMMC EQA & CQI

OVERVIEW

ASSIST is working to develop the capacity of USAID, MOH, and IP staff to conduct quality assurance (QA), quality improvement, and EQA of VMMC programs through various trainings. The training sessions and materials are aimed at engendering local and global learning on the utility of these approaches, on how to successfully design and implement CQI, and on how to effectively conduct EQAs with the use of EQA mobile application, VMMC Qual™.

KEY ACCOMPLISHMENTS AND RESULTS

- **Coordinated and led three-day USAID VMMC EQA and CQI Training** in Johannesburg, South Africa for 16 USG, IP, and MOH staff from South Africa, Swaziland, Mozambique, Zambia and Zimbabwe (Aug 2016). Sessions led by ASSIST included: Introduction to QA & QI; EQA Tools & Standards; Introduction to the EQA Online Application; VMMC CQI; and Key VMMC Quality Issues.
- Planning carried out for a second EQA-CQI training (Sept 2016). The second training was planned for October in Bethesda, MD with an expected 40 participants.

Activity 9. Dissemination of lessons learned to support scale-up of VMMC CQI

OVERVIEW

ASSIST is working to develop and publish a collection of manuscripts to share knowledge on how to conduct continuous quality improvement to support the provision of safe and effective VMMC services.

KEY ACCOMPLISHMENTS AND RESULTS

- **Discussions held with OHA centered around development of 10 peer-reviewed manuscripts, with a view to developing a 'VMMC CQI collection' to be published in 2017/18** (July-Aug 2016).

Activity 10. Integrate CQI for VMMC in Mozambique

OVERVIEW

ASSIST aims to build the capacity of the Mozambique Ministry of Health (MOH), Jhpiego/AIDSFree, and HC3 staff at eight sites in Manica and Tete provinces. We will initially work with designated VMMC staff (19 surgeons and 21 assistants), to provide formal QA/QI training sessions and provision of mentorship and technical assistance in HIV prevention. ASSIST will work with AIDSFree, HC3, and MOH staff to utilize CQI methodologies and programmatic data to identify priority areas, gauge performance, and plan for scale-up of services. ASSIST also aims to standardize VMMC tools and develop QI indicators.

KEY ACCOMPLISHMENTS AND RESULTS

- **Discussion of EQA findings in Mozambique and subsequent recommendation from the EQA team that CQI support begin as soon as possible** (Sept 2016). It was agreed between USAID, MOH, and IPs that ASSIST will work closely with AIDSFree and HC3 to support the eight USAID-funded sites with CQI training and coaching support. Further discussions on the implementation plan for ASSIST support to Mozambique will take place in October when MOH and AIDSFree staff from Mozambique participate in the EQA-CQI training sponsored by ASSIST in Bethesda.

IMPROVEMENT IN KEY INDICATORS

Activity	Indicator	Baseline (Sept 2014) (n=20)	Final value (Sept 2015) (n=20)
Apply QI principles to improve injection safety and waste management practices to reduce the transmission of blood-borne infections such as HIV, Hepatitis B and Hepatitis C (Swaziland-Implementation)	1. Compliance with safe injection procedure (7 criteria)	68.0%	87.0%
	2. Compliance with safe injection practices in the facility (7 criteria)	64.5%	85.4%
	3. Health care worker safety (5 criteria)	13.5%	84.7%
	4. Health care waste management practice (6 criteria)	30.0%	88.4%
	5. Policies, guidelines, job aids (4 criteria)	0	90.0%
	6. Equipment and supplies (4 criteria)	0	52.3%
	7. Availability of structures for to provide QI knowledge to service providers (3 criteria)	0	68.0%

GENDER INTEGRATION

Activity 5: Develop and disseminate a web-based VMMC CQI toolkit

Gender integration is addressed in the toolkit, including the ASSIST technical brief on Gender Integration in VMMC and ASSIST work on female partner involvement.

SUSTAINABILITY AND INSTITUTIONALIZATION

- **Improving injection safety and waste management to reduce the transmission of blood-borne infections such as HIV, Hepatitis B and Hepatitis C in Swaziland.** The health care waste management tools and guidelines developed with ASSIST support have been rolled out nationally.
- **Uganda Tetanus Mitigation Study.** Ensuring the safety of VMMC services, which includes mitigating the risk of tetanus infection, is essential for all programs globally. The findings of the study will directly inform the proposed MOH tetanus policy in Uganda but will also influence USAID support for tetanus mitigation in other countries.
- **Integrating CQI for VMMC activities in South Africa.** Through this work, ASSIST is transferring improvement skills to health providers within South Africa's Department of Health.
- **Developing a VMMC EQA mobile application and supporting PEPFAR EQA visits in seven PEPFAR-supported countries.** This mobile application supports further integration of quality improvement approaches into locally provided VMMC services, thereby enhancing local capacity to improve the process of care currently and moving forward.
- **Developing and disseminating a VMMC CQI web-based toolkit.** By leveraging on-the-ground experience through the creation of a tool for broader dissemination, we will support further uptake and scale-up of these approaches within the context of VMMC services.
- **Improving the quality of POC HTC in Kenya.** The learning from this activity is expected to help make the case for the expanded use of quality improvement to strengthen HTC services.

NUTRITION ASSESSMENT, COUNSELING, AND SUPPORT (NACS)/PARTNERSHIP FOR HIV-FREE SURVIVAL (PHFS)

BACKGROUND

Nutrition and food security are vital to improving and maintaining the health of people living with HIV (PLHIV). Infection with HIV increases an individual's energy and nutrient requirements. Malnutrition accelerates the progression from HIV to AIDS and leaves PLHIV more vulnerable to opportunistic infections that further compromise their health and well-being. Poor nutrition also affects the efficacy of antiretroviral drugs and the adherence of PLHIV to those drugs.

Services that identify and address malnutrition in PLHIV are most effective when integrated into existing HIV treatment and care systems. The USAID HCI and ASSIST projects have implemented **nutrition assessment, counselling, and support (NACS)** in several countries, including Malawi, Kenya, and Uganda, with significant results in identifying and improving the nutritional status of PLHIV. The projects have improved the management and nutritional status of malnourished PLHIV by: integrating NACS into facility-based ART, PMTCT, and MNCH services; strengthening community-facility linkages; and strengthening the capacities of district health managers and care providers to apply improvement skills. To date, these projects have focused primarily on case identification and categorization as well as retention of malnourished clients. Currently, there is a need to focus more on effectiveness of treatment for malnutrition, as well as on how the NACS services contribute to HIV/AIDS support.

Engagement, adherence, and retention (EAR) of HIV-positive patients remain low in many settings, and their determinants are often poorly understood. A successful intervention depends on an improved understanding of their causes. Using the QI approach, ASSIST works to improve clinical care through increased diagnosis and better management of PLHIV by applying an integrated patient-centered approach including biomedical services, NACS, and counseling/self-management support.

The 2013 and now 2016 WHO PMTCT and infant feeding guidelines require significant changes in provider practices in terms of counseling and ongoing follow-up and recommendations to women regarding breastfeeding, supplementary feeding, weaning, and follow-up after weaning. Starting in May 2014, ASSIST, in coordination with the efforts of the **Partnership for HIV-Free Survival (PHFS)**, was tasked to provide global technical leadership across the six participating countries. ASSIST was already supporting clinics and communities to improve postnatal PMTCT care for HIV-infected mothers and their infants to maximize HIV-free survival of infants in Uganda, Tanzania, Kenya, and Lesotho. The goal of PHFS is to accelerate the progress of existing national programming using QI methodologies and existing multi-country learning platforms to share successful ideas, models, and interventions.

PROGRAM OVERVIEW

What are we trying to accomplish?	At what scale?
1. Global leadership for PHFS	
<ul style="list-style-type: none"> Provide global technical leadership across the six participating countries 	<ul style="list-style-type: none"> 6 PHFS countries and globally
2. Provide improvement technical assistance and leadership for PHFS	
<ul style="list-style-type: none"> Apply improvement principles to reduce the transmission of HIV from mother to exposed infant and keep both mother and baby alive and in care (integrate nutrition into PMTCT care) 	<ul style="list-style-type: none"> Kenya, Lesotho, Tanzania, and Uganda
3. Provide improvement technical assistance and leadership for NACS	
<ul style="list-style-type: none"> Provide global technical leadership and share learning across countries integrating NACS into HIV care 	<ul style="list-style-type: none"> Provide leadership and share learning across 2-3 countries (additional countries soon to implement NACS may join in future)
4. Apply improvement principles to implement an integrated, person-centered approach to HIV and nutrition care using the NACS platform to improve engagement, adherence, and retention (EAR) for PLHIV	
<ul style="list-style-type: none"> Using the improvement approach to integrate nutrition and a self-management approach to counseling to improve PLHIV patient engagement, adherence, and retention. Strengthening the capacities of district health managers and care providers to apply improvement skills 	<ul style="list-style-type: none"> Limited number of high-volume sites in Kenya, Tanzania, & Uganda

Improvement Activity
 Cross-cutting Activity

Activity 1. Global leadership for PHFS

OVERVIEW

The objectives for the PHFS global leadership are to coordinate, document, share, and publish learning. To build on existing global knowledge about PMTCT care and infant feeding, ASSIST will work with health workers and implementing partners to harvest learning about interventions that worked in sites to share globally.

KEY ACCOMPLISHMENTS AND RESULTS

- **PHFS Quarterly Webinars (Q1-Q4).**
 - (Q1) During the fourth webinar, the Institute for Healthcare Improvement's (IHI) *Project Fives Alive! (PFA!)* shared key lessons in October 2015 from seven years of successfully scaling up high-impact maternal and child health interventions across Ghana using QI. The *PFA!* is a partnership between IHI and the National Catholic Health Service of Ghana.
 - (Q2) Organized the fifth PHFS Quarterly Webinar (Jan 2016). PHFS countries identified cross-country learning as one of the primary needs in strengthening their PMTCT knowledge base and capacities towards mainstreaming PHFS learning into national PMTCT programs. The webinar covered the planning and process of these knowledge exchanges and described the value added to global PHFS learning. Country representatives who participated in these exchanges also provided their perspectives.
 - (Q3) During the sixth PHFS Quarterly Webinar (May 2016), Nigel Rollins (WHO) and Tin Tin Sint (UNICEF) highlighted the soon to be released updated WHO and UNICEF HIV and infant feeding guidelines. They provided an overview of the guidelines and guiding statements and discussed next steps for support, monitoring, and reporting.
 - (Q4) The seventh PHFS Quarterly Webinar (Aug. 2016) was a crash course on digital health applications for EMTCT. It was led by the South Africa National Department of Health's (NDOH) Jane Sebidi, and Peter Benjamin and Idon-Nkhenso Sibuyi of HealthEnabled.
- **Attended a meeting at UNICEF in NYC to discuss dissemination of the new WHO HIV and Infant Feeding Guidelines** (Dec 2015).
- **Organized the PHFS Global Leadership Meeting in Dar es Salaam, Tanzania** (Feb 9-10, 2016). Forty (40) participants attended the meeting, representing all six PHFS countries, implementing partners, global partners, USAID, and MOH representatives who are closely involved in PHFS/PMTCT from five of the six countries (Lesotho, Uganda, Mozambique, Tanzania, Kenya). The meeting served to share changes and results leading to improvement across the PMTCT path in order to uncover and understand what each country has learned through PHFS activities. Participants also discussed ways to embed QI approaches into the system and mainstream PHFS learning/activities into National PMTCT programs.
- **Plan for JAIDS Supplement.** A pre-meeting was held on Feb 8 for a small group of representatives from USAID, WHO, IHI, HEALTHQUAL, and ASSIST. At this meeting, the group agreed to develop a supplement for publication in *JAIDS* (11 open-access papers) on the concept "multi-country initiative to improve ART delivery and mother-baby retention in care." The plan is to submit the supplement within the calendar year (December 2016) for publication in the first quarter of 2017. USAID ASSIST will lead the authorship of at least two of the papers and will be co-authors or contributors on all the other papers but two.
- **Presented at the Global Health Mini-University on the topic "Applying Improvement to Keep HIV+ Mothers and Infants in Care"** (March 4, 2016).
- **Presented PHFS results at the International Forum on Quality and Safety in Healthcare** (April 2016).
- **Convened a satellite session titled "Implementation of Option B+: Focus on the PMTCT Continuum Including Maternal/Infant Nutrition" at the 21st International AIDS Conference in South Africa** (July 2016). The session was conducted in coordination with global partners (PEPFAR/USAID, WHO, UNICEF, EGPAF) and was moderated by Chewe Luo and Tin Tin Sint of UNICEF. Tamara Nsubuga-Nyombi of ASSIST spoke on behalf of PHFS Uganda and Roland Van de Ven of EGPAF spoke on behalf of PHFS Tanzania.

Activity 2. Provide improvement technical assistance and leadership for PHFS

OVERVIEW

ASSIST HQ staff continued to support and provide technical assistance to ASSIST countries supporting PHFS activities: Uganda, Kenya, Tanzania, and Lesotho. All PHFS improvement work in these four countries is supported using Mission funding. To learn what is working, ASSIST Bethesda staff is working with country teams to harvest and document learning. In addition, we will work with government workers to scale up to new sites. The scope of these activities includes providing improvement technical assistance to:

- Reduce the transmission of HIV from mother to baby
- Keep HIV-positive mothers and babies alive and in care
- Assess for nutritional status and properly categorize, counsel, treat, and support mother-baby pairs
- Track compliance with national PMTCT and infant feeding guidelines

KEY ACCOMPLISHMENTS AND RESULTS

- **Provided technical support to Uganda, Tanzania, Kenya, and Lesotho on strengthening their databases (Jan-Feb 2016).** Worked with the Uganda team to show comparison data alongside results from their 22 PHFS demonstration sites in four key indicators (see **Figure 141 - Figure 144**). The comparison data was collected from a small number of sites, but differences are clear when contrasted with the data from PHFS sites.

Figure 141. Uganda: Proportion of HEI who receive their final rapid test at 18 months, 22 PHFS and 3 comparison sites (Jun 2013 – Sept 2015)

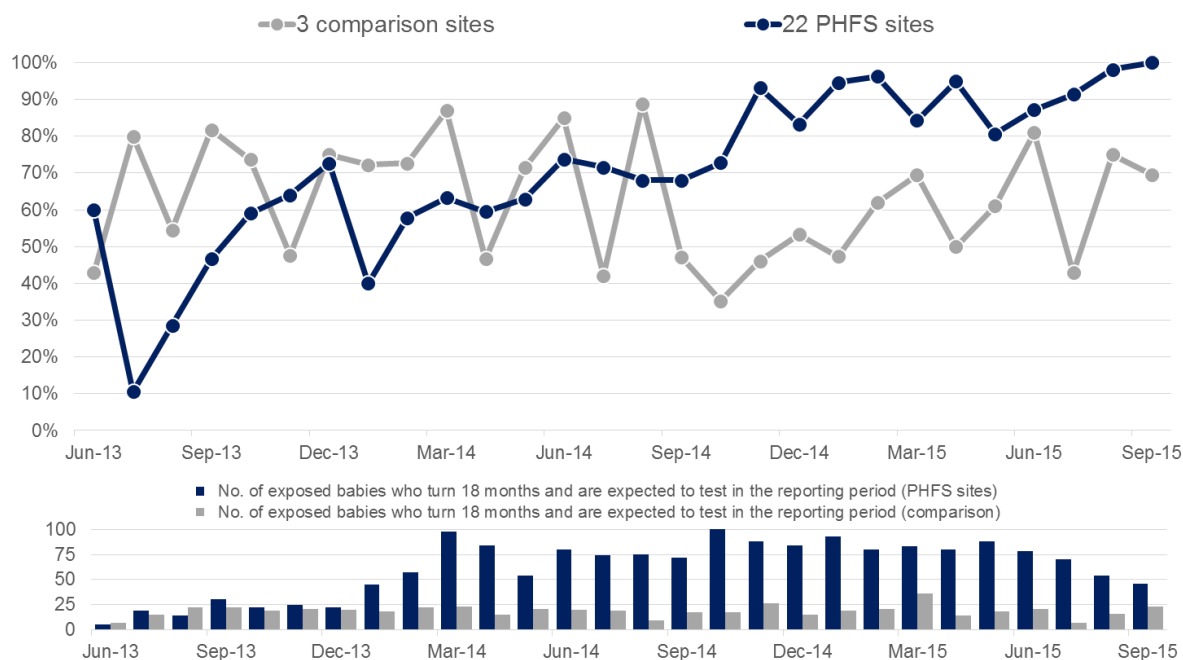


Figure 142. Uganda: Percentage of HIV-exposed infants in PMTCT programs that are alive at 18 months of age and HIV-positive, 22 PHFS sites and 3 comparison sites (Feb 2013 – Aug 2015)

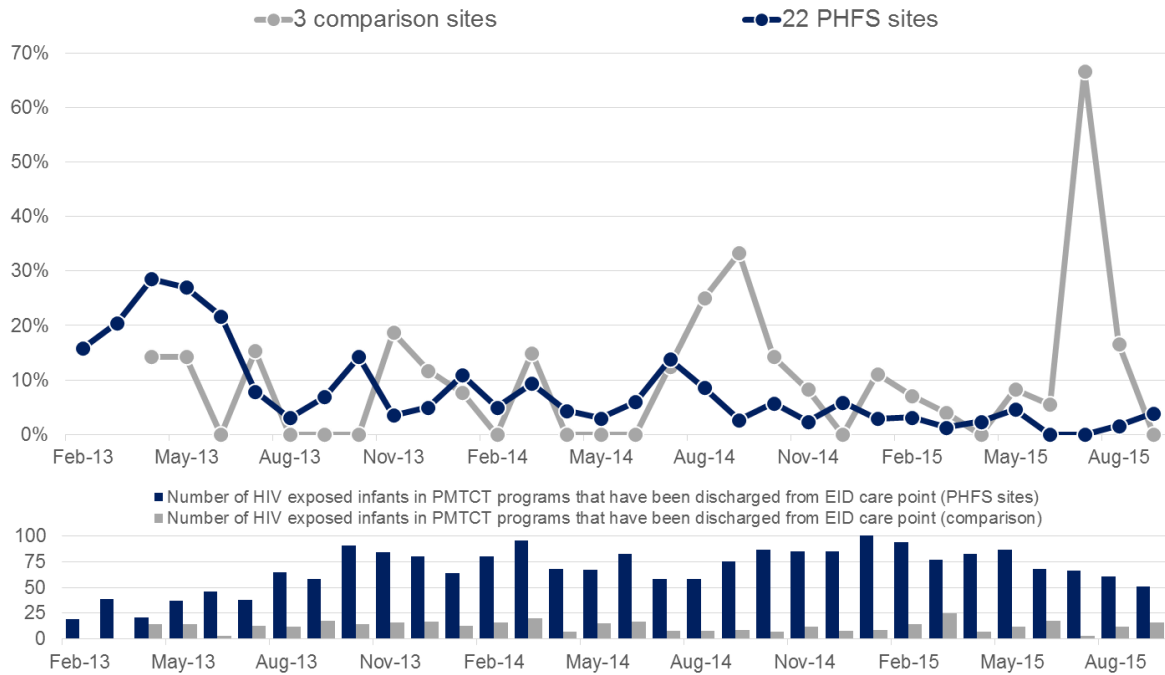


Figure 143. Uganda: Percentage of HIV-positive mothers who receive infant and young child feeding counselling at each visit, 22 PHFS sites and 3 comparison sites (Jul 2012 – Jul 2015)

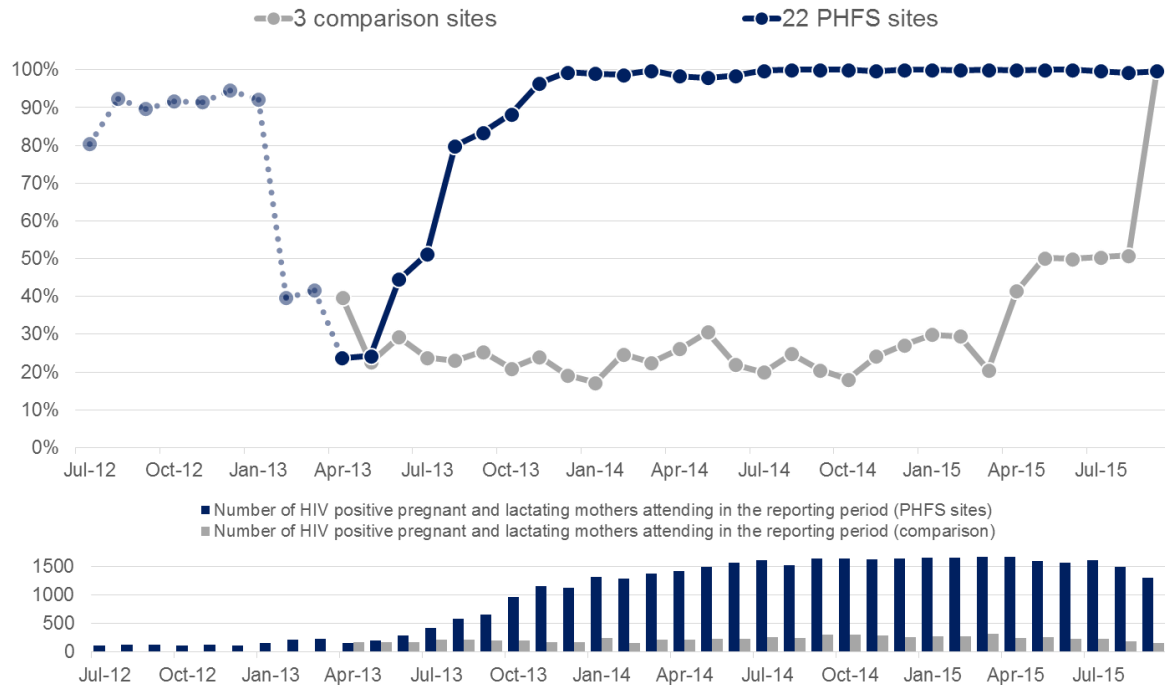
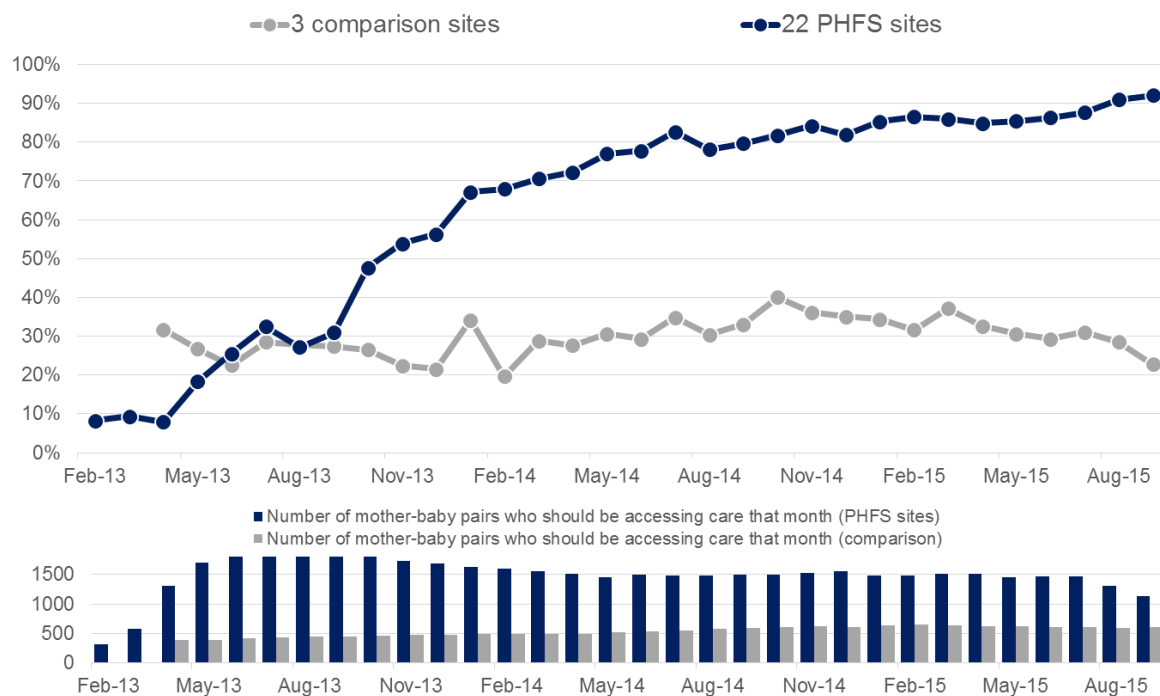


Figure 144. Uganda: Proportion of mother-baby pairs retained in care each month, 22 PHFS sites and 3 comparison sites (Feb 2013 – Aug 2015)



- Intensified remote and in-country support to the countries as they spread effective changes tested in demonstration sites to other sites and districts (see Table 26) (Q3 to present).

Table 26. Spreading learning from PHFS demonstration sites

Country	Learning Sites	Spread Sites	# of Spread Sites Reached
Kenya	16 sites/1 district	16 sites/same district	0 (spread has just begun)
Lesotho	12 sites/3 districts	All sites/all 10 districts	23
Tanzania	30 sites/3 districts	60 sites/same districts	60
Uganda	22 sites/6 districts	117 sites/Northern Uganda	75

Activity 3. Provide improvement technical assistance and leadership for NACS

OVERVIEW

ASSIST continues to support nutritional status of HIV clients by tracking clients who are assessed for nutritional status and properly categorized, counseled, treated, and supported.

KEY ACCOMPLISHMENTS AND RESULTS

- Supported ASSIST Zambia to develop a virtual site visit in the format of a photo essay for the NACS work in Kitwe, in partnership with FANTA III and LIFT II (Nov-Dec 2015). The photo essay describes the experience and flow of a client visiting the clinic for ART and NACS services and shows the various steps of the care process managed by the three projects.
 - The virtual site visit was presented by the three projects to an audience of USAID Zambia and Washington, DC at the USAID Mission in Lusaka on December 7th.

- Refined the NACS improvement platform on the ASSIST knowledge portal (July-Sept. 2016). The platform will be launched in FY17 Q1.

Activity 4. Apply improvement principles to implement an integrated, person-centered approach to HIV and nutrition care using the NACS platform to improve EAR for PLHIV

OVERVIEW

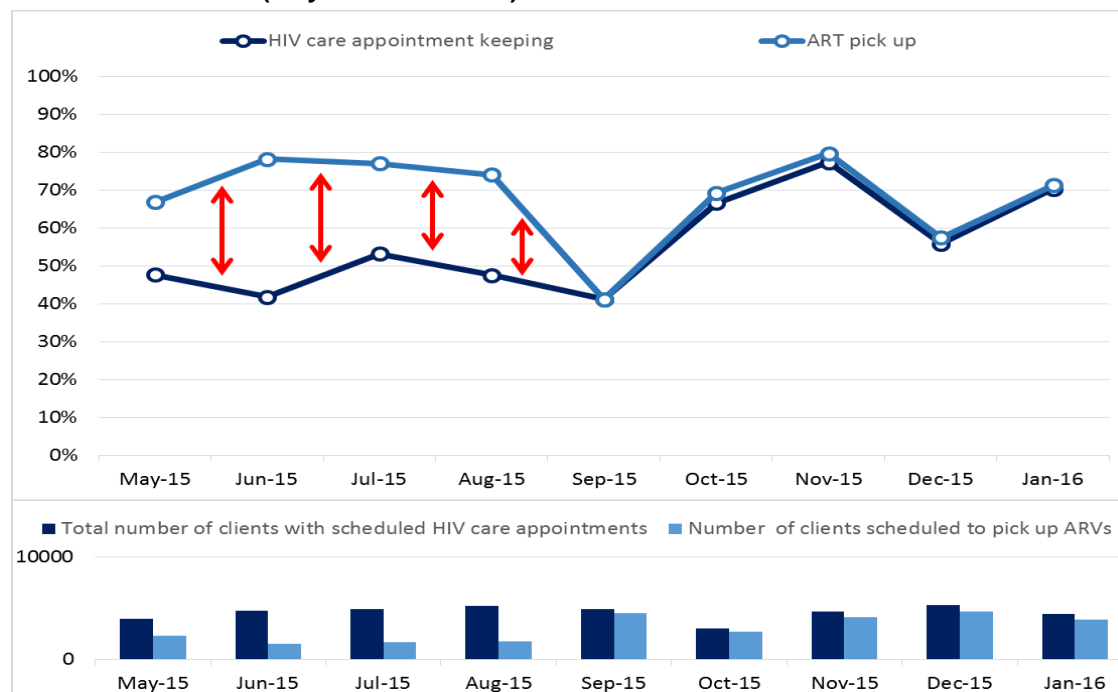
ASSIST uses improvement approaches to improve HIV-positive patient engagement, adherence, and retention using the NACS platform to integrate nutrition and a self-management approach to counseling. The research questions are as follows:

- What are the causes of non-adherence and loss to follow-up with ART?
- What changes to service delivery could improve engagement, adherence, retention and wellness?
- What information is being imparted to / understood by clients during self-management counseling sessions, and subsequently acted upon

KEY ACCOMPLISHMENTS AND RESULTS

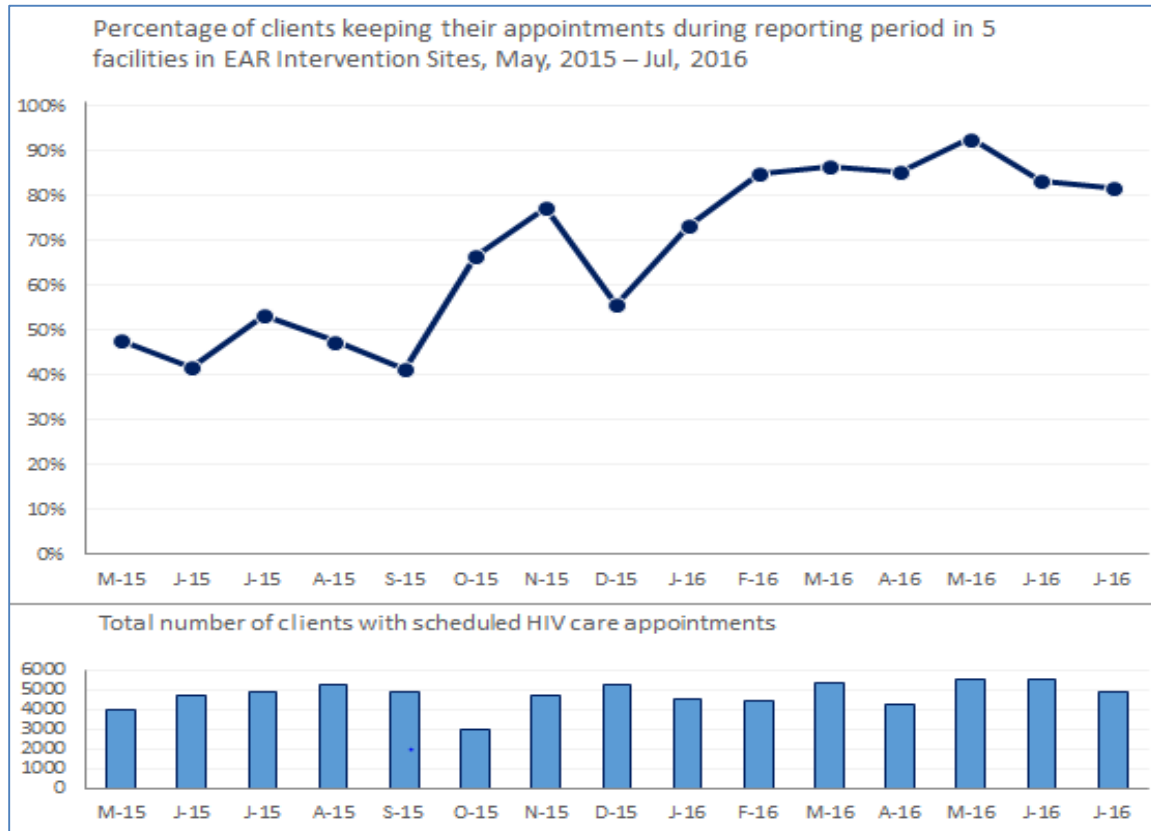
- Conducted self-management support trainings in three countries: Uganda, Kenya, and Tanzania (Sept – Oct 2015)
- Conducted improvement activities in the three countries post self-management support training—this support is continuous (Q1-Q2).
- Figure 145 - Figure 147 show the progress of this improvement work in Northern Uganda. Changes tested to increase ART appointment-keeping included: Allocating a person to update the register; educating clients on importance of keeping appointments; improving clinic flow to reduce waiting time; conducting roll call 4 times on a clinic day; instituting weekly data review and immediate updating of registers; generating a list of those lost to follow-up for tracing; and engaging linkage facilitators to update registers.

Figure 145. Northern Uganda: Percentage of clients keeping their HIV/ART care appointments, 5 intervention sites (May 2015-Jan 2016)



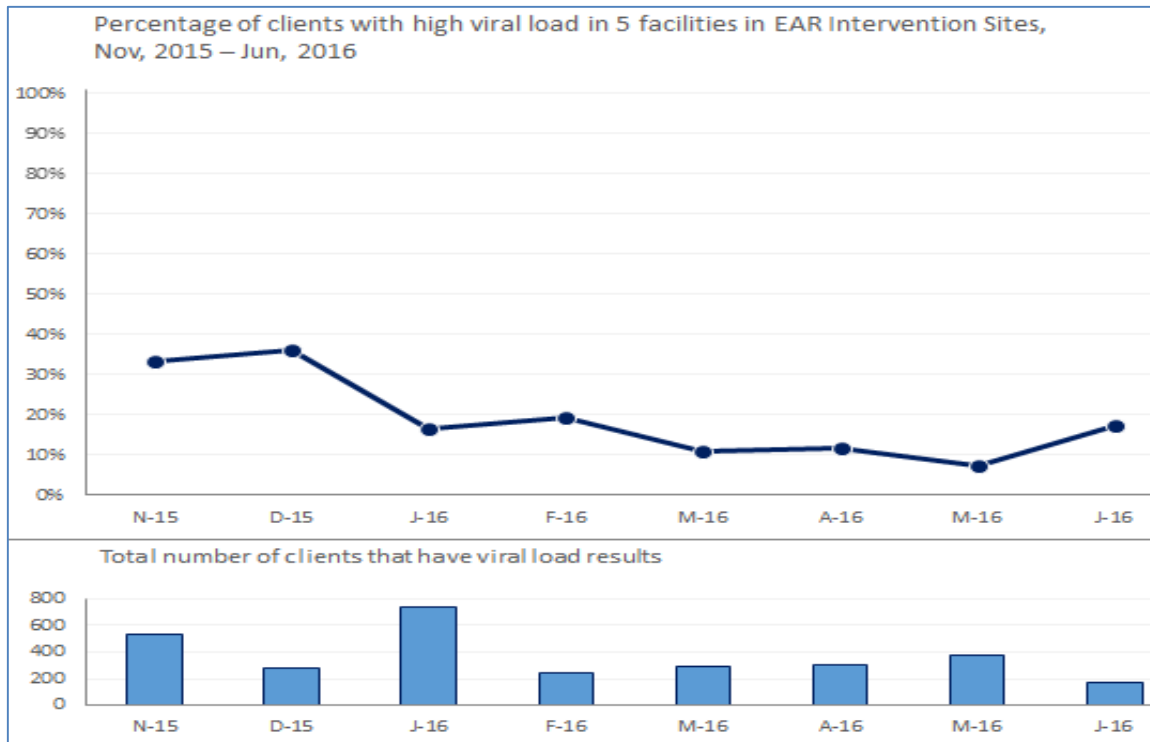
- Improvements in appointment keeping as a proxy to retention:** At clinic level, sites have been supported to test changes for improving appointment keeping. Changes included improving counselling, following up of patients enrolled on SMS at community level, and improving the quality of data. **Figure 146** shows that appointment keeping has improved from 46% at baseline in 2015 to 82% in July 2016. Keeping appointments means that patients are regularly reviewed and supported.

Figure 146. Northern Uganda: Percentage of clients keeping their appointments, 5 facilities in EAR intervention sites (May 2015 – July 2016)



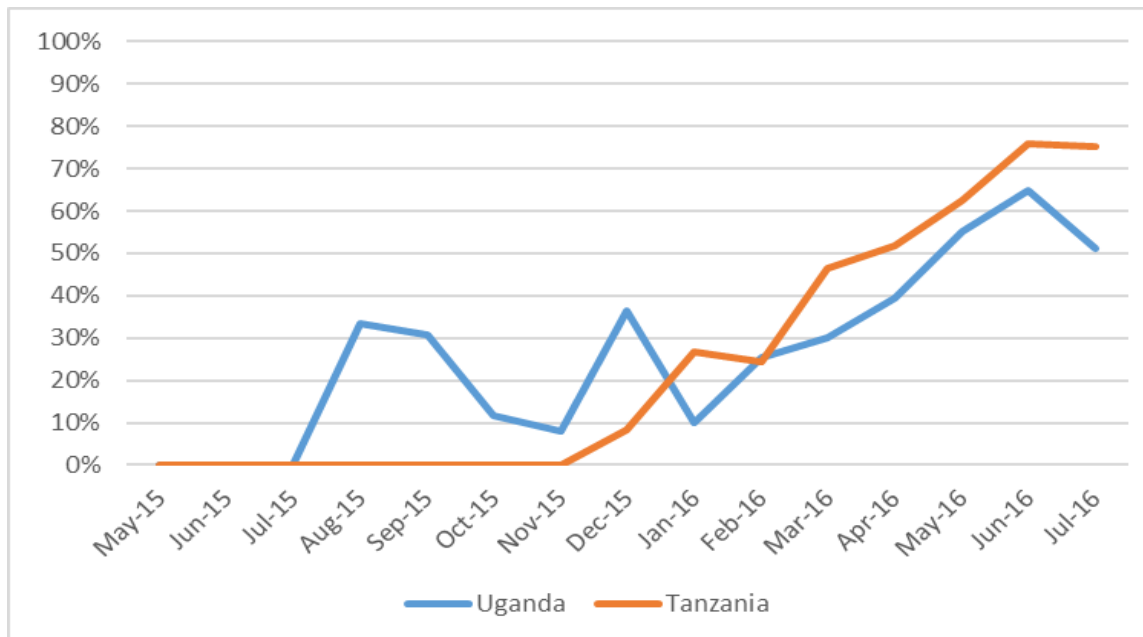
- Viral load suppression:** With continued support, the proportion of clients with a high viral load has also reduced drastically from 32% in November 2015 to 20% in July 2016 (**Figure 147**).

Figure 147. Northern Uganda: Percentage of clients with high viral load, 5 facilities in EAR intervention sites (Nov 2015 – June 2016)



- **Figure 148** shows the progress of improvement work in the percentage of clients with a self-management action plan in both Uganda and Tanzania

Figure 148. Uganda and Tanzania: Percentage of enrolled clients with a self-management action plan (May 2015 – Jul 2016)



- **Supported a fourth country, Zambia, to begin EAR work, which started in Sept 2015 (Q1-Q2).** Zambia’s work is Mission-funded, and progress is presented in the Zambia section of the report. The self-management support training in Zambia took place in January 2016.

- **Convened a two-day ASSIST EAR regional meeting** (Sept. 2016). Staff from Kenya, Tanzania, Uganda, USA, and Zambia participated. Participants reviewed data, results, progress, the project's timeline, revised indicators and documented what has been learned to date. It was an important and productive meeting for sharing and cross-country learning.
- **Conducted improvement activities in the three countries post self-management support training** (Q1-4). This support is continuous.
- **Developed sex-disaggregated databases with common NACS and EAR indicators, and discussed disaggregated data by sex with country teams** (Aug – Sept 2016). Worked with gender and data specialists at HQ to develop sex-disaggregated databases and discuss with country teams.

IMPROVEMENT IN KEY INDICATORS

Activity	Indicators	Country	Baseline 5 sites, (average May- October 2015)	Interim (5 sites)	Last value (5 sites)
Implement an integrated, person-centered approach to HIV and nutrition care using the NACS platform to improve engagement, adherence, and retention (EAR) for PLHIV	% of clients with a self-management action plan	Kenya	0%	24% (May 2016)	*
		Tanzania	0%	62% (May 2016)	75% (July 2016)
		Uganda	0%	65%, 5 sites (June 2016)	51% (2 sites)
	% of clients presenting for scheduled appointment during the reporting period	Kenya	76%	80% (May 2016)	86% (June 2016)
		Tanzania	59%	71% (May 2016)	77% (July 2016)
		Uganda	46%	83% (June 2016)	82% July, 2016 (5 sites)

* Data pending

GENDER INTEGRATION

- Countries implementing the EAR work (Activity 4) are collecting sex-disaggregated data at baseline, and all three countries have chosen a select number of indicators to disaggregate by sex and analyze for differences. If differences are identified, improvement efforts will be targeted to close the gaps identified.
- At the September 2016 EAR Regional Meeting, teams agreed to collect sex-disaggregated data for as many of the earmarked indicators as feasible. Teams will address any gender gaps that are found. The baseline data for this activity was collected and is being analyzed sex-disaggregated by ASSIST's partner, Harvard.

SUSTAINABILITY AND INSTITUTIONALIZATION

All the work ASSIST does on NACS and PHFS are conducted in close partnership with the national MOH, district health offices, other partners, and the USAID Missions. The PHFS work was designed to be integrated into the respective countries' national PMTCT strategies, which is happening in the four countries in which ASSIST works.

Common Agenda Activities


GLOBAL TECHNICAL LEADERSHIP

BACKGROUND

ASSIST's global technical leadership activities on behalf of USAID seek to further advance and inform the field of improvement globally by engaging and building capacity of USAID implementing partners and global health organizations to expand the application of improvement approaches. The project's technical leadership and communication activities seek to raise the global health community's understanding of the value of improvement methods to health systems strengthening. In addition, we seek to demonstrate how USAID investment in this project provides good value for money by producing meaningful results and generalizable methods linked to USAID's Global Health priorities of Ending Preventable Child and Maternal Deaths and achieving an AIDS-Free Generation.

PROGRAM OVERVIEW

What are we trying to accomplish?	At what scale?
1. Increase the application of improvement methods	
<ul style="list-style-type: none"> Expand the use of modern improvement approaches in USAID-assisted health care systems and by USAID cooperating agencies through global technical leadership for USAID's worldwide efforts to improve health care in developing countries 	Global, regional
2. Demonstrate results	
<ul style="list-style-type: none"> Demonstrate the results of USAID's investment in health care quality improvement 	Global, regional

 Cross-cutting Activity

Activity 1. Increase the application of improvement methods

OVERVIEW

As the USAID Office of Health Systems' flagship project on improvement, ASSIST has a mandate to coordinate and collaborate with international agencies and United States Government implementing partners to expand the application of modern improvement methods, particularly in USAID-assisted countries and in support of USAID global health priorities. Project staff fulfil this role by raising awareness of the value of improvement methods through participation in technical working groups and expert consultations and contributions to frameworks, issue papers, and working papers.

KEY ACCOMPLISHMENTS AND RESULTS

- Convened an in-person meeting of the OVC Task Force:** Dr. Diana Chamrad, ASSIST Director for Vulnerable Children and Families, was invited to join the leadership team of the inter-agency OVC Task Force. The Task Force convened an all-day learning event at URC headquarters focused on the implications of PEPFAR 3.0 for OVC programming (Oct. 7, 2015). Dr. Chamrad and other ASSIST staff are participating in the activities of the Task Force to ensure that our experience with applying improvement methods to OVC programming are represented.
- Cost-effectiveness analysis (CEA) training for US Government staff.** Dr. Edward Broughton led a five-day CEA training for USG and partner staff from South Africa, Lesotho, and Mozambique, convened by USAID in Maputo, Mozambique (Nov. 16-20, 2015). Participants included 16 staff from USAID Mozambique, two from USAID Rwanda, three from CDC, one from OGAC, three from Mozambican NGOs, and two from the Ministry of Health of Mozambique.
- Presented on improvement at the LAC Newborn Alliance Regional Meeting:** Dr. Jorge Hermida represented the USAID ASSIST Project at the Annual Meeting of the LAC Neonatal Alliance, held in Panama City, Panama (Nov. 16-17, 2015). ASSIST is a founding member of the Alliance, which is celebrating ten years of continued work in the region; Alliance members include

PAHO, UNICEF, USAID, UNFPA, and SM2015. Through the Alliance, ASSIST multiplies the reach and impact of its Spanish-language MNCH knowledge management tools.

- **Convened Governance and Quality Product Development Roundtable Meeting** in Dar es Salaam, Tanzania (Feb. 29-March 1, 2016). Some 30 participants from 11 countries met to discuss best practices and lessons learned from governing quality. The meeting was convened by USAID ASSIST together with the USAID Health Finance and Governance Project.
- **Applying improvement methods to antimicrobial resistance:** In coordination with the World Alliance against Antibiotic Resistance, Dr. Nigel Livesley presented on how improvement methods can be applied to antimicrobial resistance and HIV at the 12th International Congress on AIDS in Asia and the Pacific, held in Dhaka, Bangladesh (Mar. 11-14, 2016).
- **Every Newborn Action Plan (ENAP) Matrix Meeting** in UK: Dr. Tamar Chitashvili contributed to the development of the study protocol for testing the validity of ENAP coverage indicators (April 2016).
- **WHO SEARO Quality Improvement Training:** Dr. Livesley co-facilitated a four-day workshop, jointly with local ASSIST partner AIIMS. Participants from 10 countries attended and were supported to develop a QI project to implement back at their facilities (May 2016).
- **National Kenya Health Improvement Policy and Kenya Quality Model for Health Review workshop:** Dr. Massoud and Ms. Joyce Hightower from WHO presented at this workshop with national health policymakers in Kenya (June 5-10, 2016).
- **Strengthening Leadership Skills to Support QI training course, Dar es Salaam, Tanzania:** This course, led by Dr. M. Rashad Massoud and Dr. Victor Boguslavksy of ASSIST and Ms. Rhea Bright of USAID, attracted participation from various Missions and Ministries of Health from East, South and West Africa (June 13-16, 2016).
- **GHeL Improving Health Care Quality Study Group:** Ms. Kim Stover and Dr. Silvia Holschneider led a four-day study group of individuals who had completed the Improving Health Care Quality eLearning course (June 20-23, 2016). Additional ASSIST staff participated as expert commentators.
- **Technical Advisory Meeting of High Impact Practices on Family Planning in Geneva at WHO:** Dr. Chitashvili presented at WHO on post-partum family planning as a high-impact practice and provided input on development and refinement of the FP Goals Model (June 20-21, 2016).
- **Technical Working Group on Newborn Resuscitation:** Dr. Chitashvili presented the findings of the assessment conducted by ASSIST in Uganda on quality of newborn resuscitation services together with Dr. Jesca Subiiti of the Uganda MOH (June 21-22, 2016).
- **Survive and Thrive Global Development Alliance:** Dr. Chitashvili presented lessons from ASSIST's MNCH QI work in Uganda to make the case for how QI methods enable teams to improve care with existing resources and strengthen systems to sustain the results (July 2016). ASSIST is playing a lead role in the development of the Survive and Thrive QI guide, Improving Care of Mothers and Babies, which is in the final stages of technical review and publication.
- **Salzburg Global Seminar:** Chaired by Dr. Massoud, Session 565 of the Salzburg Global Seminar, "Better Health Care: How Do We Learn About Improvement?" engaged 14 ASSIST staff, five ASSIST partner staff, USAID, and other international improvement and research experts in a five-day intensive seminar in Salzburg, Austria, to explore new ways of evaluating and studying improvement interventions to increase attribution, validity, and generalizability of results (July 10-15, 2016).
- **VMMC Quality assurance and quality improvement training:** The ASSIST South Africa team organized a three-day training for PEPFAR in Johannesburg, South Africa for 16 USG, IP, and MOH staff from South Africa, Swaziland, Mozambique, Zambia and Zimbabwe (Aug 2016).
- **Quality & Result-based Financing:** Ms. Lisa Dolan-Branton presented on ASSIST's experience with applying health systems interventions in raising quality of care at the Results-based Financing workshop in Harare, Zimbabwe (Sept. 19, 2016).

Activity 2. Demonstrate results

OVERVIEW

The project seeks to advance the field of improvement by testing and demonstrating the effectiveness of improvement approaches in health care, health workforce development, and social and community services for vulnerable children and families. Through dissemination of findings and results from technical assistance and research and evaluation activities, the project contributes to the evidence base for the application of modern improvement methods and makes the case for why investment in improvement approaches offers value for money.

KEY ACCOMPLISHMENTS AND RESULTS

- As shown in **Table 27** below, ASSIST staff and partners participated in 17 international conferences during FY16, leading 18 sessions and workshops and delivering 20 oral and 12 poster presentations.

Table 27. USAID ASSIST Project conference participation, FY16

Conference	USAID ASSIST Staff Presentations
<p>International Society for Quality in Health Care <i>Oct. 4-7, 2015</i> Doha, Qatar</p>	<ul style="list-style-type: none"> Pre-conference workshop “Sure your improvement effort is really worth it?” led by Edward Broughton Panel discussion “Lessons learned from the Ebola response: how to improve health care safety and quality” led by M. Rashad Massoud with Shams Syed and Neelam Dhingra-Kumar of WHO “Quality strategies to improve healthcare” led by M. Rashad Massoud and Amanda Ottosson “Using a culturally-sensitive approach to improve patient care” led by Taroub Faramand, WI-HER, LLC Oral presentation “The Chronic Care Model improves HIV patient care in Uganda” by Edward Broughton Oral presentation “Working with a cascade approach to monitor and evaluate HIV chronic care outcomes” by George Aluma Oral presentation “Towards an HIV-free generation: Putting the needs and values of HIV-positive mothers and their babies at the forefront of their care” by Tamara Nsubuga-Nyombi Oral presentation “Improving timely access to ART amongst TB/HIV co-infected ART naïve clients: successes from high TB/HIV-burden Kampala City, Uganda” by Connie Namajji Oral presentation “Improving care for patients with non-communicable diseases in Georgia is cost-saving” by Edward Broughton Oral presentation “The role of PHC supervision in continuous quality improvement: Results from an evaluation in 96 health facilities in Mpumalanga Province, South Africa” by Donna Jacobs Oral presentation “The role of government in fostering health care quality improvement in low-resource settings: Experience from Uganda” by Herbert Kisamba Oral presentation “Increasing Community TB case detection in an urban setting. A community-led intervention” by Herbert Kisamba
<p>Global Maternal Newborn Health Conference <i>Oct. 18-21, 2015</i> Mexico City, Mexico</p>	<ul style="list-style-type: none"> Oral presentation “Improving Access to and Quality of Essential Obstetric and Newborn Care in Cotopaxi, Ecuador: A Controlled, Prospective Evaluation” by Jorge Hermida

Conference	USAID ASSIST Staff Presentations
	<ul style="list-style-type: none"> • Oral presentation “System level Integration of Mother-Baby Services to Eliminate Mother to Child Transmission of HIV/AIDS (EMTCT): The Missing Link” by Isaac Chome • Oral presentation “Improving Measurement and Quality: Maternal Death Surveillance and Response in Botswana” by Morrison Sinvula • Jorge Hermida also moderated the panel, “Innovative and Collaborative Regional Response to Improved Newborn Surveillance in Latin America and the Caribbean”
Asia Pacific Academic Consortium for Public Health Conference <i>Oct. 21-23, 2015</i> Bandung, Indonesia	<ul style="list-style-type: none"> • Oral presentation “Hospital Accreditation Process Impact Evaluation (HAPIE): Patient satisfaction at the early stage of National Health Insurance (NHI) implementation: A comparative study before and after NHI implementation at nine class A public hospitals in Indonesia” by Kamaluddin Latief (Center for Family Welfare, Universitas Indonesia)
3rd World Congress on Integrated Care and the 8th National Congress of Integrated Medicine <i>Nov. 19-21, 2015</i> Mexico City, Mexico	<ul style="list-style-type: none"> • Oral presentation “Rationale for improving integrated service delivery: Reduced cost and improved care in Georgia” by Tamar Chitashvili • Dr. Chitashvili’s presentation was awarded the “Integrated Care Prize” for best paper presented at the conference.
Jordan Health Care Accreditation Council Conference <i>Nov. 23-25, 2015</i> Amman, Jordan	<ul style="list-style-type: none"> • M. Rashad Massoud led a half-day skill-building workshop, “Improvement 101” • Oral presentation “The importance of real time data” by M. Rashad Massoud • Oral presentation “Managing knowledge to improve care” by M. Rashad Massoud
International Conference on Family Planning (ICFP) <i>January 25–28, 2016</i> Nusa Dua, Indonesia	<ul style="list-style-type: none"> • Oral presentation “Addressing myths and misconceptions to increase the use of contraceptives: Uganda quality improvement approach” by Rosette Birungi • ASSIST sponsored the participation of Dr. Placid Miyaho and Sr. Miriam Namugeere of the MOH in the session, “Quality across the continuum: how do we ensure that care is respectful and women-centered?”
Prince Mahidol Award Conference <i>January 26-31, 2016</i> Bangkok, Thailand	<ul style="list-style-type: none"> • Oral presentation “Findings from the CHW Harmonization Study Conducted by the USAID ASSIST Project” by Jan-Walter De Neve of Harvard T.F. Chan School of Public Health
IBFAN Regional Conference <i>February 1-4, 2016</i> Kampala, Uganda	<ul style="list-style-type: none"> • Oral presentation “The Global Partnership for HIV-Free Survival (PHFS): Improving eMTCT and Infant Feeding” by Tamara Nsubuga-Nyombi
Global Health Mini-University <i>March 4, 2016</i> Washington, DC	<ul style="list-style-type: none"> • Policy Choices: Improving Quality While Reducing Costs of NCD Services (Tamar Chitashvili) • Ensuring Safe, Effective VMMC Services Through Local Quality Improvement Teams (Sharon Stash) • Simple Rules for Collaborating, Learning and Adapting (Lani Marquez, Kate Fatta, Sid Deka)

Conference	USAID ASSIST Staff Presentations
	<ul style="list-style-type: none"> Governing Quality – The Secret Sauce to Successful UHC (Amanda Ottosson and Ruben Frescas of WHO with Altea Cico and Kelley Laird from Health Financing and Governance) Applying Improvement to Keep HIV+ Mothers and Exposed Infants in Care (Anisa Ismail) Why Is Quality Improvement within UHC (M. Rashad Massoud), within the lunchtime panel “Looking at UHC through the lens of Essential Packages of Health Services”
<p>Ending Gender Inequalities: Addressing the Nexus of HIV, Drug Use, and Violence with Evidence-based Action <i>April 12-13, 2016</i> Chapel Hill, NC</p>	<ul style="list-style-type: none"> Julia Holtemeyer presented the poster, “Gender Integration: The Key to Sustained Improvements in HIV Programs”
<p>International Forum on Quality and Safety in Healthcare <i>April 12-16, 2016</i> Gothenburg, Sweden</p>	<ul style="list-style-type: none"> M. Rashad Massoud, Victor Boguslavsky, and Amanda Ottosson presented the workshop, “Workshop: Leading Improvement Efforts for Global Health Leaders M. Rashad Massoud, Victor Boguslavsky, and Amanda Ottosson presented the workshop “Leadership Strategies to Improve Global Health” Nigel Livesley presented the speaker session, “A review of four approaches for large scale spread: Learning from India” Amy Stern, Tamara Nsubuga-Nyombi, and Stella Mwita presented the speaker session, “HIV-Free Survival: Proven interventions to reduce Transmission from mother to baby to under 5%” M. Rashad Massoud moderated a panel discussion on how to translate a global priority/ policy/ national policy to the national/ regional level, discussing best practices and challenges Tamar Chitashvili presented the poster, “Rationale for improving integrated service delivery: reduced cost and improved care in Georgia
<p>American Evaluation Association Summer Evaluation Institute <i>June 28-29, 2016</i> Atlanta, GA</p>	<ul style="list-style-type: none"> Edward Broughton delivered the workshop, “Advanced Cost-Effectiveness Analysis for Health and Human Service Programs” twice during the meeting
<p>Salzburg Global Seminar <i>July 10-14, 2016</i> Salzburg, Austria</p>	<ul style="list-style-type: none"> M. Rashad Massoud, Leighann Kimble, Donna Jacobs, Victor Boguslavsky, Nigel Livesley, Maina Boucar, Kate Fatta, Lisa Dolan-Branton, Charles Kimani, Houleymata Diarra, James Ndirangu, Jorge Hermida, and Anjali Chowfla participated, along with Jim Heiby and Rhea Bright of USAID
<p>International AIDS Conference <i>July 17-22, 2016</i> Durban, South Africa</p>	<ul style="list-style-type: none"> Donna Jacobs, John Byabagambi, and James Ndirangu presented in the ASSIST-led Satellite Session, “Voluntary Medical Male Circumcision Quality Assurance and Quality Improvement: Lessons Learned from East and Southern Africa” (co-chaired by Yogan Pillay and Emmanuel Njeuhmeli)

Conference	USAID ASSIST Staff Presentations
	<ul style="list-style-type: none"> • Tamara Nsubuga-Nyombi presented in the USAID-UNICEF-led satellite session, “Implementation of Option B+: Focus on the PMTCT Continuum including Maternal/Infant Nutrition” • Raymond Mabuse made the oral poster presentation, “Continuous Quality Improvement for Voluntary Male Medical Circumcision Training: Experiences and results from the field” • John Byabagambi presented the poster, “Improving cost-effectiveness by managing HIV as a chronic disease in Uganda” • Albert Twinomugisha presented the poster, “Gender Integration in VMMC to Improve Outcomes: Involving Female Partners” • Joseph Kundy presented the poster, “Better HIV care and engaged health workers: A mixed methods study from Tanzania” • James Ndirangu presented the poster, “Conducting External Quality Assessments for Voluntary Male Medical Circumcision (VMMC) programs: experiences from four countries” • Tina Maartens presented the poster, “Applying Continuous Quality Improvement (CQI) in Voluntary Medical Male Circumcision – experiences & lessons learnt” • Themba Masina presented the poster, “Improving Client follow up in Voluntary Medical Male Circumcision (VMMC) programs through Continuous Quality Improvement CQI: experiences from South Africa” • Till Bärnighausen of HSPH presented the poster, “The social acceptability of community health worker-led HIV-testing: Findings from a mixed-methods study in Swaziland”
<p>NCD Research Symposium <i>Aug 8-9, 2016</i> Atlanta, GA</p>	<ul style="list-style-type: none"> • M. Rashad Massoud and Tamar Chitashvili participated in this invitation-only meeting. • Dr. Chitashvili made the oral presentation, “Challenges to Measure Cardiovascular Disease Prevention Efforts: Learning from the Georgia Experience”
<p>Third National Healthcare Quality Improvement Conference <i>Aug 22-24, 2016</i> Kampala, Uganda</p>	<ul style="list-style-type: none"> • Mirwais Rahimzai and the entire ASSIST team in Uganda participated along with M. Rashad Massoud, Victor Boguslavsky, Tamar Chitashvili, Ram Shrestha, Taroub Faramand, and Rachel Gutierrez
<p>International Forum on Quality and Safety in Health Care—Asia <i>Sept. 26-28, 2016</i> Singapore</p>	<ul style="list-style-type: none"> • Roselyn Were presented the poster, “Client Involvement Towards Strengthening Malnutrition Cure Rates Amongst HIV Malnourished Clients in Five Select Hospitals in Homabay” • Maero Lutta presented the poster, “Improving malaria diagnosis and case management in Khunyangu Sub-county Hospital, Kenya” • Peter Mutanda presented the poster, “Application of Quality Improvement Approaches in Reducing Neonatal Sepsis”

- **Publications demonstrating improvement results and approaches:** As shown in **Table 28**, project staff published seven articles in peer-reviewed journals during FY16. In addition, the project published 13 case studies, 23 technical and research reports, nine short reports, and 13 guides and job aids in FY16. The project also published 23 annual reports in FY16.
- **Multimedia products.** Also detailed in **Table 28**, the project launched in October 2015 an eLearning course on health care improvement on the USAID Global Health eLearning Center. In

February 2016, the project launched a web-based learning platform for the Partnership for HIV-Free Survival on the ASSIST website. A short documentary on VMMC quality improvement was developed by the ASSIST team in South Africa and shown at the International AIDS Conference in July 2016, and another four videos describing improvement approaches were posted during the year, including videos explaining the six-step approach to gender integration in improvement work in English and French.

Table 28. USAID ASSIST Project publications in FY16

Articles Published in Peer-Reviewed Journals
Chitashvili T. Rationale for improving integrated service delivery: reduced cost and improved care in Georgia. Conference Abstract published in <i>International Journal of Integrated Care</i> Vol 15 17 Nov 2015, WCIC3 Supplement: URN:NBN:NL:UI:10-1-117353. Available at: http://www.ijic.org/index.php/ijic/article/view/2333/3114
Clarke D, Duke J, Wuliji T, Smith A, Phuong K, San U. Strengthening health professions regulation in Cambodia: a rapid assessment. Published 10 March 2016 in <i>Human Resources for Health</i> 14:9.
Sarin E, Lunsford SS, Sooden A, Rai S, Livesley N. The Mixed nature of incentives for community health Workers: lessons from a qualitative study in two districts in India. Published 14 March 2016 in <i>Frontiers in Public Health</i> 4:38. doi: 10.3389/fpubh.2016.00038.
Marianne Calnan M, Haumba S, Matsebula M, Shongwe N, Pasipamire M, Levy NK, Mirira M, Preko P, Smith-Arthur A, Ghazaryan V. Delivery of isoniazid preventive therapy to reduce occupational TB among healthcare workers in Swaziland. Published 26 May 2016 in <i>Southern African Journal of Infectious Diseases</i> . 2016. DOI: 10.1080/23120053.2016.1181421.
Massoud RM, Barry D, Murphy A, Albrecht Y, Sax S, Parchman M. How do we learn about improving health care: a call for a new epistemological paradigm. Published 26 April 2016 in <i>Int J Qual Health Care</i> . 2016, 1–5. doi: 10.1093/intqhc/mzw039.
Broughton EI, Muhire M, Karamagi E, Kisamba H. “Cost-effectiveness of implementing the chronic care model for HIV care in Uganda.” <i>International Journal of Quality in Health Care</i> . Published online 21 September 2016. http://intqhc.oxfordjournals.org/content/early/2016/09/21/intqhc.mzw116
Broughton EI, Marquez L. Perspective: “Why economic analysis of health system improvement interventions matters.” <i>Frontiers in Public Health</i> . Accepted for publication 21 September 2016. Published on 11 October 2016. http://dx.doi.org/10.3389/fpubh.2016.00218 .
Case Studies (Date Published)
Supporting vulnerable children to return and stay in school: Lessons learned from three Village Child Protection Committees in Amuru Sub-county, Uganda. <i>Case Study</i> (December 2015)
Integrating Nutrition Services in HIV and TB care in Kitwe, Zambia. <i>Case Study</i> (March 2016)
Intégration du Genre dans l’Amélioration de la Qualité: Augmenter l’accès aux services de santé pour les femmes en milieu rural au Mali. <i>Etude de cas</i> (March 2016)
Gender integration in quality improvement: Increasing access to health services for women in rural Mali. <i>Case Study</i> (May 2016)
The impact of quality improvement projects on TB treatment outcomes in Piggs Peak Hospital, Swaziland. <i>Case Study</i> (June 2016)
The role of village child protection committees to support vulnerable children with social services: A story from Katuba Village, Uganda. <i>Case Study</i> (June 2016)
Increasing the enrollment of malnourished clients on ready-to-use therapeutic foods at Kitgum General Hospital, Northern Uganda. <i>Case Study</i> (June 2016)
Increasing viral load monitoring of people living with HIV on ART in Northern Uganda in line with the 90-90-90 global targets. <i>Case Study</i> (June 2016)
Improving malaria case management at Khunyangu Sub-County Hospital, Kenya. <i>Case Study</i> (June 2016)
Strengthening HIV linkage and retention through improved community/facility collaboration in Palla Road, Botswana. <i>Case Study</i> (August 2016)
Improving hand washing among parent attendants entering the new-born intensive care unit of Ram Manohar Lohia Hospital, New Delhi, India. <i>Case Study</i> (September 2016)

Integrating gender and gender-based violence in medical and nursing curricula in Nicaraguan universities. <i>Case Study</i> (September 2016)
Strengthening integrated family planning/maternal and neonatal health post-partum services and associated health system functions in Niger. <i>Case Study</i> (September 2016)
Technical and Research Reports (Date Published)
Development of Minimum Care Standards for Orphans and Vulnerable Children in Haiti. <i>Final Report</i> (October 2015)
Technical Advisory Group Meeting for the USAID Applying Science to Strengthen and Improve Systems (ASSIST) Project. <i>Meeting Report</i> (October 2015)
East Africa Core Competency Framework for Quality Improvement. <i>Technical Report</i> (October 2015)
Report on Voluntary Medical Male Circumcision Baseline and Follow-on Assessment for Continuous Quality Improvement. Malawi. <i>Technical Report</i> (December 2015)
Improving Alcohol and Tobacco Control During Pregnancy in Ukraine. <i>Final Report</i> (December 2015)
Synthèse de la mise en oeuvre de la planification familiale dans le post partum au Mali. <i>Synthèse technique</i> (February 2016)
Botswana Maternal Mortality Reduction Initiative. <i>Technical Report</i> (March 2016)
The effectiveness and efficiency of implementing the chronic care model for HIV care in Uganda. <i>Research and Evaluation Report</i> (March 2016)
Validation of data in the USAID ASSIST Project HIV care improvement activities in Tanzania. <i>Research and Evaluation Report</i> (March 2016)
Data validation report for the USAID ASSIST Project orphans and vulnerable children improvement work in Malawi. <i>Research and Evaluation Report</i> (March 2016)
Facteurs Associés à l'Implication des Partenaires des Femmes Enceintes reçues en Consultation Périnatales au Burundi. <i>Rapport de recherché et d'évaluation</i> (March 2016)
Malawi Children's Corners Situational Assessment. <i>Technical Report</i> (March 2016)
Do quality improvement initiatives lead to improved work culture? A qualitative study of six government health facilities in India. <i>Research and Evaluation Report</i> (March 2016)
Improving Quality of Postpartum Family Planning in Low-Resource Settings: A Framework for Policy Makers, Managers, and Medical Care Providers. <i>Technical Report</i> . (April 2016)
Tanzania-Kenya knowledge exchange for the Partnership for HIV-Free Survival: Reflections and recommendations. <i>Technical Report</i> (May 2016)
Validation of quality improvement team functionality in Kenya. <i>Research and Evaluation Report</i> (May 2016)
Using Collaborative Improvement to Enhance Postpartum Family Planning in Niger. <i>Technical Report</i> . (May 2016)
Evaluation of TB/HIV Collaborative Activities in Swaziland: Intensified Case Finding Cascade, Provision of Antiretroviral Therapy for HIV-Positive TB Patients, and TB Infection Control. <i>Research and Evaluation Report</i> . (May 2016)
Landscape Analysis of Global Learning Networks to Inform the Development of a Learning Laboratory for Quality Universal Health Coverage. <i>Technical Report</i> . (June 2016)
Assessment of the quality of basic resuscitation services in Uganda. <i>Technical Report</i> (August 2016)
Institutional Roles and Relationships Governing the Quality of Health Care: Country Experiences, Challenges, and Lessons Learned. (Joint product with HFG) (August 2016)
Improving the performance of district management teams in the Lindi Region of Tanzania. <i>Technical Report</i> . (August 2016)
Synthèse des meilleures pratiques anémie au Mali. <i>Rapport technique</i> . (September 2016)
Guides and Tools (Date Published)
Singh R, Singh M, Jha R, Sharma P, Livesley N. Improving Quality in Healthcare. A practical guide for healthcare providers (March 2016)

Health Facility Guide for Assessing Treatment of Febrile Illness (May 2016)
HIV job aids for the Democratic Republic of Congo: The project developed nine poster-reminders in French for health workers, for display in facilities: 1) Critères de mise sous Traitement ARV; 2) Schémas préférentiels et alternatifs de première ligne chez les enfants, adolescents et adultes – Infection par le VIH1; 3) Principaux effets secondaires observés avec les médicaments de première ligne; 4) Modalités de substitution en cas d'intolérance à une molécule; 5) En cas d'échec de traitement de 1ère ligne, les associations suivantes sont recommandées pour le passage en 2ème ligne; 6) Suivi clinique des patients avant la mise sous ARV; 7) Suivi clinique des patients après le début du Traitement ARV; 8) Suivi biologique – Investigations généralement utilisées pour initier un traitement par les ARV (1); and 9) Suivi biologique – Investigations généralement utilisées pour initier un traitement par les ARV (2) (May 2016)
Taylor L, Ottosson A, Massoud MR. Improving Health Care Training Facilitator Guide (June 2016)
Massoud MR, Ottosson A, Nsubuga-Nyombi T, Karamagi E, Stern A, Ismail A, Boguslavsky V, Livesley N, Faramand T, Holtemeyer J. Improving Health Care Training Participant Guide (June 2016)
Short Reports (Date Published)
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How to include the denominator or "n" on charts. <i>Short Report</i> (February 2016)
Responding to gender issues to improve outcomes in nutrition assessment, counseling, and support services. <i>Technical Brief</i> (May 2016)
Six-step approach to identify and close gender-related gaps. <i>Technical Brief</i> (June 2016)
Approche en six étapes pour identifier et combler les écarts liés au genre (June 2016)
Répondre aux besoins des hommes, des femmes, des garçons et des filles dans les services de HIV et ART (July 2016)
Applying the Science of Improvement to Strengthen Systems and Improve Health Outcomes in Kenya. <i>Short Report</i> (August 2016)
Annual Reports (Date Published)
ASSIST Mali Country Report FY15 (October 2015)
ASSIST Haiti Country Report FY15 (October 2015)
ASSIST Malawi Country Report FY15 (November 2015)
USAID ASSIST Project Annual Performance Monitoring Report FY15. Performance Period: October 1, 2015- September 30, 2015 (November 2015)
ASSIST Documentation and Knowledge Management Report FY15 (December 2015)
ASSIST Research and Evaluation Report FY15 (December 2015)
ASSIST Botswana Country Report FY15 (December 2015)
ASSIST Burundi Country Report FY15 (December 2015)
ASSIST Cambodia Country Report FY15 (December 2015)
ASSIST Cote d'Ivoire Country Report FY15 (December 2015)
ASSIST Democratic Republic of Congo Country Report FY15 (December 2015)
ASSIST India Country Report FY15 (December 2015)
ASSIST Indonesia Country Report FY15 (December 2015)
ASSIST Kenya Country Report FY15 (December 2015)
ASSIST Lesotho Country Report FY15 (December 2015)
ASSIST Mozambique Country Report FY15 (December 2015)

ASSIST Nicaragua Country Report FY15 (December 2015)
ASSIST South Africa Country Report FY15 (December 2015)
ASSIST Swaziland Country Report FY15 (December 2015)
ASSIST Tanzania Country Report FY15 (December 2015)
ASSIST Uganda Country Report FY15 (December 2015)
ASSIST Ukraine Country Report FY15 (December 2015)
ASSIST Zambia Country Report FY15 (December 2015)
Multi-media
<i>Improving Health Care Quality</i> eLearning Course. Published on the Global Health eLearning Center on Oct. 19, 2015. Available at: http://www.globalhealthlearning.org/course/improving-health-care-quality
Quality Improvement Initiatives under the Government of India's RMNCH+A Strategy: Lessons from Chamba, Himachal Pradesh (December 2015). Available at: https://vimeo.com/149801779
How addressing gender considerations in ASSIST's work leads to better outcomes (January 2016). Available at: https://vimeo.com/151537169
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Six-step approach to integrate gender (March 2016). Available at: https://vimeo.com/162572852
"Approche en 6 étapes pour identifier et combler les écarts liés au genre" (August 2016). Available at: https://vimeo.com/177470579
"A Finer Cut: South Africa's Journey to Improve Quality in Voluntary Medical Male Circumcision". Documentary shown at the VMMC Satellite event sponsored by ASSIST at the International AIDS Conference (July 2016). Available at: https://vimeo.com/176167841

- **Continued developing British Medical Journal Quality Improvement Reports (BMJ QIR):** In the second quarter of FY16, one article was submitted to BMJ QIR ("Strengthening pharmaceutical human resources and improving medicines availability and use in Uganda"), however the BMJ reviewers felt that additional information was needed before it was suitable for the journal. ASSIST decided to withdraw the submission from BMJ QIR and submitted it instead to Human Resources for Health. As of September 2016, the BMJ was still in the process of revising its submission guidelines for BMJ QIR. The BMJ agreed to extend the ASSIST subscriptions to the program through 2017 to allow for completion of all manuscripts, once BMJ has finalized its submission guidelines. Approximately 15 manuscripts are expected to be submitted to BMJ QIR in FY17.
- **Supported Jim Heiby's QI Case Book Project:** During the year, staff from the ASSIST knowledge management team have worked with Dr. Jim Heiby and Ms. Rhea Bright of the USAID Office of Health System to review and edit QI cases: Ms. Lani Marquez, Dr. Silvia Holschneider, Ms. Kate Fatta, Mr. Sid Deka, Ms. Kim Stover, Ms. Mayssa el Khazen, Ms. Julia Holtemeyer, and Ms. Alison Lucas. In August 2016, Ms. Lucas took over coordination of the QI Case Book project from Ms. Vicky Ramirez.

Briefings:

- **Briefing for the President's Malaria Initiative:** Dr. Massoud, Dr. Sharon Stash, and Ms. Amanda Ottosson presented on ASSIST's malaria results in a briefing for the head of PMI, Admiral Ziemer (Jan. 20).
- **VMMC brownbag presentation at USAID Global Health Bureau:** Dr. Jacobs, Dr. Byabagambi, Dr. Massoud, Dr. Heiby and Dr. Njeuhmeli presented a briefing at the Global Health Bureau in Crystal City, VA on "Voluntary Medical Male Circumcision (VMMC) Quality Assurance and Improvement in East and Southern Africa: Lessons for Other Countries and Programs" (June 21, 2016)

- **Office of Health Systems brown bags:** Ms. Lisa Dolan-Branton presented on “Methods and Tools for Improvement” (April 20, 2016). Ms. Marquez presented on “What does knowledge management have to do with making health systems stronger?” (September 28, 2016).

KNOWLEDGE MANAGEMENT


BACKGROUND

In FY16, ASSIST continued to emphasize the harvesting and documentation of learning from the implementation of country-level improvement, research, and evaluation activities and making that learning available in a variety of knowledge product formats. In FY16, we also began development of new toolkits on the ASSIST knowledge portal to make synthesized knowledge available for specific topics in easy-to-use formats and continued to add more multi-media content to the project website. ASSIST partner Johns Hopkins Center for Communication Programs (CCP) maintains the web platform housing the ASSIST Knowledge Portal. Integration of gender considerations in improvement continues to be emphasized as a key area of learning about how to make improvement activities more effective and efficient. This activity, led by ASSIST partner WI-HER, LLC, also seeks to increase awareness of gender-based factors affecting quality and outcomes among staff and partners.

PROGRAM OVERVIEW

What are we trying to accomplish?	Scale
1. Implement and evaluate knowledge management (KM) strategies for ASSIST	
<ul style="list-style-type: none"> • Conduct studies to evaluate KM activities and demonstrate the value-added of deliberate KM strategies • Support country and technical teams to define learning strategies and incorporate KM principles and technique in improvement strategy design and implementation • Coordinate the preparation of the annual work plan and the review and signing of improvement plans • Manage quarterly, semi-annual, and annual reporting to USAID 	All ASSIST countries Country-level studies: Uganda, India, Latin America
2. Document learning from improvement	
<ul style="list-style-type: none"> • Develop the capacity of ASSIST staff and counterparts to implement KM approaches to connect implementers and generate learning and insights from improvement activities • Support country and technical teams to design processes to document and synthesize learning from improvement 	All ASSIST countries
3. Manage the ASSIST knowledge portal and related websites	
<ul style="list-style-type: none"> • Operate the ASSIST knowledge portal (https://www.usaidassist.org) and www.maternoinfantil.org website and communities of practice • Develop new webpages and mini-sites in response to country and technical unit requests • Make key learning and improvement information available on the ASSIST knowledge portal through knowledge products, toolkits, videos, slide decks, reports, and blogs • Search out and cross-post relevant content from ASSIST partners, other USAID cooperating agencies, and other technical organizations 	Global
4. Integrate gender considerations in improvement activities	
<ul style="list-style-type: none"> • Support country and HQ teams in integrating gender issues and considerations in the planning and implementation of improvement activities • Document impact of addressing gender factors on improving care quality and outcomes 	Global

What are we trying to accomplish?	Scale
<ul style="list-style-type: none"> Develop technical briefs, tools, videos, and other resources to inform the integration of gender considerations in improvement 	
5. Promote the use of improvement knowledge	
<ul style="list-style-type: none"> Conduct improvement-related webinars, virtual trainings, and discussion forums, partnering as appropriate with other organizations Use social media channels to promote ASSIST knowledge products, the application of improvement approaches, and ASSIST knowledge portal content Deliberately synthesize key points of learning from each new ASSIST product and disseminate to all staff Promote resources posted to the ASSIST knowledge portal through listservs, blogs, and presentations Support ASSIST country teams in creating local knowledge repositories and disseminating knowledge products 	Global

 Cross-cutting Activity

Activity 1. Implement and evaluate KM strategies for ASSIST

OVERVIEW

We continued to develop the capacity of ASSIST country and technical teams to address learning questions in improvement strategy design and to apply KM methods—especially conversational approaches like storytelling, after action reviews, and knowledge cafés—with teams and coaches that focus on the question, *What have we learned to improve this aspect of care?* Such approaches complement data and help implementers to generate insights about how results were achieved, what were the most important changes that led to those results, and what advice implementers would give to others to apply what they learned. ASSIST is drawing on the project’s research team and the CCP research and evaluation experts to help us evaluate KM strategies in terms of reach, use, and impact. We are supporting country and technical teams in enhancing the learning aspects of improvement efforts and support sharing of insights and results in meeting USAID reporting requirements.

KEY ACCOMPLISHMENTS AND RESULTS

- **Annual deliverables completed on schedule:** The project’s KM/Communications team supported the development of the ASSIST FY16 consolidated work plan (Oct 2015), the preparation of the annual performance monitoring report for FY15 (Nov 2015), the preparation of 20 annual country reports for FY15, and the preparation of the annual research and evaluation report and the annual documentation and knowledge management report for FY15 (Oct-Dec 2015)
- **End line data collection (Feb 2016) and analysis completed for the Safe Male Circumcision (SMaCKM) study (Aug 2016).** Manuscripts have been drafted and will be finalized in FY17.
- **KM support for Botswana:** Ms. Lani Marquez worked with the ASSIST team in Gaborone for three days during private travel to Botswana (Dec 2015). She presented to the team on knowledge management principles, techniques, and strategies that can support the ASSIST community HIV work program in Botswana and advised on a KM strategy.
- **Evaluation completed of the India MNCH change packages.** The evaluation also gathered suggestions from staff interviewed on how to improve future change packages aimed at health workers.
- **KM studies:** Led by Dr. Sarah Lunsford, data analysis was completed for the LAC virtual collaborative evaluation (July 2016). Dr. Lunsford drafted a manuscript which is in internal technical review. Mr. Sidhartha Deka supported the India team in finalizing a technical report on the findings from interviewing 38 health workers from facilities in all six states regarding the layout and usefulness of the state-level change packages for reproductive, maternal, and newborn health care.
- **Support for semi-annual and quarterly reporting:** The KM team supported the October, January, April, and July quarterly review meetings and submitted the project’s semi-annual report

on time (May 15, 2016). During the third and fourth quarters, the HQ team focused on helping country teams produce better quality quarterly reports to meet Mission needs.

- **Continued support for development and approval of improvement and activity plans:** Dr. Silvia Holschneider supported technical and country teams to get technical content and gender integration feedback on draft plans.
- **Briefing for the Office of Health Systems on ASSIST's use of KM approaches:** The presentation at the Global Health Bureau by Ms. Marquez highlighted what ASSIST has learned about designing learning strategies in improvement work and the collection, synthesis, and dissemination/transfer of learning in the past four years, and how these lessons can inform other health systems strengthening activities (Sept. 28, 2016).

Activity 2. Document learning from improvement

OVERVIEW

The project emphasizes the development of “knowledge products” to synthesize learning from country programs and consolidate information about successful changes into collections of resources. Such products include intervention packages and tools that can be readily spread to new sites as well as case studies that explain what specific actions teams took to achieve results. While the primary users of these products are in country, they are also disseminated globally through the ASSIST knowledge portal and social media. In FY16, the headquarters' KM team also continued to support country and technical teams to use KM techniques to more efficiently harvest and spread learning through face-to-face interaction (e.g., storytelling and knowledge synthesis in learning sessions; implementers sharing what they learned with the next district as it begins improvement activities; knowledge exchanges and handovers, etc.).

KEY ACCOMPLISHMENTS AND RESULTS

- **Support for the PHFS Regional Meeting in Dar es Salaam** (Feb 2016). Mr. DeKa provided extensive KM support for the design and implementation of this regional meeting. Before the meeting, he supported ASSIST headquarter and field staff to document key learning and results from PHFS-related PMCT interventions for sharing at the meeting. At the meeting (9-10 February 2016), he supported documentation and facilitation of sessions with 38 participants along with introducing participants to the web-based PHFS Learning Platform.
- **Support for the development of improvement knowledge products in French** (Q2-3). Ms. Mayssa el Khazen provided virtual support to the Mali team to develop knowledge products in French on anemia prevention and control, application of the safe childbirth checklist, post-partum family planning, and management of pre-eclampsia and eclampsia. She also supported the Mali team to develop a case study in French and English on addressing gender issues in community-level anemia prevention work. In addition, she worked with the DRC team to complete and publish nine job aids on antiretroviral treatment (July 2016). Ms. el Khazen reinforced communication and knowledge sharing between francophone teams by channeling content, disseminating new productions of French toolkits, notices of webinars, reports and guides to ensure transfer of best practices across country and project technical teams.
- **Support to Zambia for the development of a case study** (March 2016): Ms. el Khazen worked with Mr. Robert Musopole to develop a case study on the NACS work in the Mindolo Health Center in Zambia.
- **Developed Health Facility Quality Assessment Guide for Febrile Illness** (March 2016). Ms. Julia Holtemeyer worked with technical leads to develop an assessment guide for febrile illness case management in health facilities with QI teams. The guide provides direction and tools for improvement teams to assess their current systems and processes of care for patients who present with fever, focusing on children under five and pregnant women because of their unique vulnerabilities.
- **KM support to Tanzania** (Q2-3): Ms. Kate Fatta provide KM support to Tanzania team in Dar es Salaam to produce a guidance document regarding what interventions resulted in improvement in each of the three PHFS districts (March 12-19). She also worked with Dr. Betty Hizza to complete the AIMGAPS final report and change package. Ms. Fatta returned to the Tanzania office in June to work with the KM Officer, Ms. Delphina Ntangeki, and support documentation of

the work of community improvement teams to get vulnerable children tested for HIV and on treatment.

- **Support to new KM Officer in Kenya** (June 2016). Ms. Fatta provided virtual and in-person KM orientation to Kenya's new KM Officer. In Kenya, she visited sites where malaria improvement work is ongoing and documented it in a case study. With the KM Officer, she also discussed with the technical teams their KM needs for the remainder of FY16 and FY17 and outlined knowledge products to be developed. She also supported the development of an overview flyer on the ASSIST program in Kenya.
- **KM support to Uganda** (May-Aug 2016): Mr. Deka, Dr. Holschneider, and Ms. Marquez provided suggestions and edits for several knowledge products developed by Uganda team related to the HIV continuum of response, VMMC, OVC improvement, and family planning
- **KM support to MNCH** (April-May 2016): Dr. Holschneider worked with Dr. Tamar Chitashvili to finalize the post-partum family planning quality framework (April-May 2016).
- **KM support to Swaziland** (April-June 2016): Dr. Holschneider worked virtually with the Swaziland team to finalize the TB-HIV evaluation and two case studies.
- **KM support to Cambodia** (Aug-Sept 2016): Dr. Holschneider provided behavior change communication technical support to the Cambodia team to develop instruments for interviews and focus groups with health professionals and Council representatives and to develop a performance monitoring plan for the project.
- **KM support to India** (July-Sept 2016): Mr. Deka provided virtual support to the India team for the development of QI training materials and case studies.
- **KM support to Botswana** (Aug-Sept 2016): Ms. Fatta and Ms. Kim Stover supported the Botswana team to finalize a community health case study (Aug-Sept 2016).
- **KM support to Nicaragua** (Sept 2016): Ms. Holtemeyer supported the Nicaragua team to complete a gender case study.

Activity 3. Manage the ASSIST knowledge portal and related websites

OVERVIEW

With support from CCP, the project is continuing to enhance the ASSIST knowledge portal with new content and features. ASSIST is also continuing to support the www.maternoinfantil.org Spanish-language web portal for maternal and newborn care to test how web-based mechanisms can support improvements in care at low cost. This activity involves liaising with other groups and knowledge portals related to ASSIST's areas of work, to identify opportunities for collaboration and cross-posting of content.

KEY ACCOMPLISHMENTS AND RESULTS

- **Coordination with QICIP** (Nov 4, 2015). Ms. Marquez presented by WebEx to Dr. George Tidwell and Ms. Katherine O'Connor of HRSA and Mr. Josh Bardfield of HEALTHQUAL on ASSIST's knowledge portal and ways that ASSIST can collaborate with the QICIP mechanism to make learning available about HIV improvement.
- **Developed the web-based PHFS Learning Platform** (Feb 2016). Mr. Deka worked with the ASSIST PHFS technical team to develop a dedicated section of the ASSIST website to showcase the country and global results of the Partnership for HIV-Free Survival (usaidassist.org/toolkits/partnership-hiv-free-survival-learning-platform). The PHFS Learning Platform presents resources and approaches from country teams and governments to mainstream PHFS approaches within national PMTCT programs.
- **Development of the NACS Improvement Platform** (July-Sept 2016): Ms. el Khazen and Mr. Deka worked with ASSIST's NACS-PHFS team to develop the structure for the NACS improvement platform, including working with URC media to create video clips and the NACS virtual site visit slide show. This mini-site will go live in the first quarter of FY17.
- **Support for the development of the VMMC CQI Toolkit** (July-Sept 2016): Ms. Marquez worked with the South Africa KM team, Dr. Donna Jacobs, and Dr. John Byabagambi from Uganda to develop content for the VMMC CQI toolkit, which will be hosted on the ASSIST knowledge portal.

- **Support for the design of the Zika web site and community of practice** (Sept 2016): Ms. Alison Lucas and Ms. Marquez provided inputs to the team in Quito developing the SMI Zika web site and community of practice which will go live in the first quarter of FY17.

Activity 4. Integrate gender considerations in improvement activities

OVERVIEW

The gender integration activity seeks to build capacity in gender integration in all ASSIST-supported countries by developing tools and instructional guidance to support staff in addressing gender issues that affect health outcomes and care quality. This activity, led by partner WI-HER, LLC, also seeks to increase knowledge sharing and expand the evidence base for gender integration in improvement work. We are also working to ensure that gender issues are adequately captured in ASSIST monitoring and evaluation activities so as to measure the effectiveness and impact of gender integration in improvement.

KEY ACCOMPLISHMENTS AND RESULTS

- **Led an hour of the 16 Days of Activism against Gender-based Violence Tweet Chat Relay** (Dec 10, 2015).
- **Gender updates sent out to the ASSIST listserv** (Dec 17, 2015, March 23, 2016, and Aug 1, 2016).
- **Conducted a desk review and developed a tool for implementing partners to use to identify and address gender-based violence (GBV) in ASSIST economic strengthening programs** (Dec 2015, Jan 2016).
- **Created and disseminated two videos in a series of instructional videos on gender and gender integration** in improvement activities to build capacity of ASSIST staff, implementing partners, and stakeholders. The first is titled, “How addressing gender considerations in improvement work leads to better outcomes” (Jan 2016). The second is titled, “Six-step Approach to Identify and Close Gender-related Gaps” (March 2016).
- **Discussed and identified gender integration support for the Mali and South Africa Integrated People Centered Health Services activities with WHO colleagues** (Feb-March 2016).
- **Led half an hour of the #WDchat16 International Women’s Day Tweet Chat Relay** (March 7, 2016). Dr. Taroub Faramand of WI-HER, LLC tweeted about using data to advance gender equality, and the importance of sex-disaggregated data and gender-sensitive indicators in the design, implementation, and monitoring of improvement work.
- **Developed gender integration content for the ASSIST QI Training Course Participant Guide** (March 2016). Added examples showing the importance of sex-disaggregated data in identifying and closing gaps in improvement outcomes to the Participant Guide of the electronic QI Training Course.
- **Onsite technical assistance in gender integration to ASSIST Uganda** (April 2016). The visit of Dr. Faramand focused on GBV prevention in the northern region as part of an overall improvement approach to eliminate new HIV infections and pregnancies among girls and adolescent girls 10-24 years of age under the DREAMS Initiative. She conducted an assessment visit to Gulu and designed a GBV prevention training module to be incorporated in the facilitator training manual based on the Stepping Stones package’s approach to empower individuals to manage HIV. Dr. Faramand conducted a pilot training for facilitators in Gulu and supported the roll-out of the training in three communities in Bardege sub-county in Gulu District. This resulted in designing an innovative approach to integrate gender in improvement activities towards eliminating new incidence of pregnancies and HIV infections among girls and young women 10-24 years of age. In addition to the DREAMS Initiative activities, Dr. Faramand provided technical support on gender integration issues in the COR HIV/TB and PHFS programs.
- **Onsite technical support in gender integration to ASSIST Botswana** (May 2016). Ms. Holtemeyer conducted a three-day gender sensitization and gender integration in QI training for ASSIST Botswana technical staff. This included exercises and discussions on the differences between sex and gender; how and why to follow our six-step approach to gender integration; an

overview of the gender analysis process; sensitization to and discussion about gender-based violence; and exercises and discussions on gender issues affecting ASSIST Botswana community QI work. Ms. Holtemeyer also provided TA to identify and respond to gender-related gaps to improve linkage, retention, and adherence in care at the community level and build local capacity; provided TA on sex-disaggregated and gender-sensitive data collection and analysis; and accompanied staff on two site visits to support integrating gender in coaching visits.

- **Developed gender integration training content for IPCHS Mali** (May 2016) and discussed cross-learning opportunities for ASSIST and WHO with **WHO Gender Technical Officer** (June 2016).
- **Continued documenting gender integration activities and results.** Illustrative activities to address gender considerations in improvement work are summarized by country in **Table 29**.

Table 29. Illustrative ASSIST gender integration activities, FY16

Country	Illustrative ASSIST Gender Integration Activities
Botswana	HIV: Onsite training and TA visit on gender integration, from which the coaching guide was edited to include questions on sex-disaggregated data and gender issues. One CIT tailored its house-to-house testing drive to successfully mobilize and test men with high-risk behaviors.
Burundi	PMTCT: The team drafted a case study on gender integration in PMTCT and male partner involvement. The standard change package used in scale-up includes gender-sensitive efforts to increase male partner involvement in ANC and HIV testing rates.
Cote d'Ivoire	HIV: The team adapted existing data collection tools to include space for sex-disaggregated data and explained to QI teams the importance of making this change. The team discussed the importance of gender integration, sex-disaggregated data, and gender-sensitive indicators with the national HIV/AIDS program and implementing partners.
DRC	HIV: Data were collected but not analyzed sex-disaggregated. One facility QI team implemented added clinic hours on Saturday and Sunday afternoons in an effort to increase HIV testing for men (the hours are not only for men, just meant to make it more convenient for people who work during normal business hours during the week, of which a high proportion of men do).
Kenya	NACS/EAR: Sex-disaggregated data were collected for the baseline assessment on determinants of engagement, adherence, and retention to treatment and community resources to support self-management for PLHIV. OVC: The team continues to collect and analyze sex-disaggregated OVC data, and support QI teams to provide gender- and age-appropriate PSS to children.
Malawi	Malaria: Data collection tools are partially sex-disaggregated OVC: Gender content has been integrated into QI trainings, and education and health indicators are collected and analysed sex-disaggregated. VMMC: Gender content has been integrated into QI trainings.
Mali	IPCHS: Used customized gender integration materials in trainings and learning sessions. MNCH: The team drafted a case study on their anemia work and how gender has been integrated in working with communities to reduce anemia. Due to the power relationship within the family, community committees have targeted husbands and mothers-in-law with prevention messages to raise their awareness on the importance of ANC in the first trimester of pregnancy and get their support for access to services (financial and family support to treatment). A gender improvement plan has been shared with the project team in order to confirm gaps identified and develop a work plan for implementation.

Country	Illustrative ASSIST Gender Integration Activities
Nicaragua	HIV/AIDS: Training for medical and nursing students addressed gender-related issues including stigma, discrimination, sexual diversity, and gender-based violence. The trainings were designed to address the strong sentiments of discrimination and stigma directed towards persons living with HIV among students and faculty. The team published a case study on this work.
Swaziland	TB/HIV: The evaluation of the TB/HIV collaborative revealed that more women than men access care (which is in line with known health-seeking behavior patterns), and that more female than male eligible clients start IPT but that once on treatment, especially anti-TB treatment, more male than female clients achieve treatment success (more female clients fail or default on treatment).
Tanzania	NACS/EAR: Sex-disaggregated data were collected for the baseline assessment on determinants of engagement, adherence, and retention to treatment and community resources to support self-management for PLHIV. OVC: Sex-disaggregated databases continued to be used to track data. PMTCT: The team is testing involvement of male partners to improve maternal and newborn retention and also to improve male patients' health, to test and enroll them in care if they test positive. Changes tested have resulted in an increase in male partner testing in sites integrating gender compared to data for sites not integrating gender.
Uganda	ASSIST Uganda has integrated gender throughout its activities; data are disaggregated by sex and gender gaps are identified and addressed when relevant. COR (TB/HIV): Appointment keeping among women and men was assessed over three weeks to identify solutions in response to findings. Gaps among women and men were closed with an overall appointment keeping reaching almost 90%. DREAMS: Onsite visits and trainings on gender integration and GBV prevention. NACS/EAR: Sex-disaggregated data were collected for the baseline assessment on determinants of engagement, adherence, and retention to treatment and community resources to support self-management for PLHIV. Some program indicators were collected and analysed by sex. PHFS: Gender content was incorporated in the national QI training materials. SMGL: Gender was considered as a driving factor affecting antenatal care. Once integrated, antenatal visits increased by 80% in one community in Lira District.
Zambia	NACS/EAR: Sex-disaggregated data were collected for the baseline assessment on determinants of engagement, adherence, and retention to treatment and community resources to support self-management for PLHIV. Some program indicators were collected and analysed by sex, as well as by age. At one facility, the team identified that more females were accessing health services, assessed, and malnourished compared to males, but also that males experience improved nutrition substantially faster once in treatment – due to food allocation within families.
Zika	Zika counselling guide and FP activities included gender-sensitive language to target both women and men of reproductive age, and emphasize the importance of constructive engagement of sexual partners.

- Onsite technical assistance to ASSIST Uganda** (Aug 2016). Dr. Faramand followed up from her April 2016 TA visit to provide onsite support to integrate gender in QI activities, particularly in DREAMS activities in three districts in Lira, Gulu and Oyam. This support included discussing and finalizing monitoring tools, participating for an interagency visit to DREAMS sites and explaining the ASSIST approach to implementing DREAMS activities, participating in work planning discussions, proposing activities and approaches to meet project needs, designing gender sensitization sessions and training ASSIST staff, and implementing three sensitization session for

mothers, fathers, and sexual partners of DREAMS activity participants (adolescent girls and young women at high-risk for HIV).

- **Developed EAR and NACS sex-disaggregated databases** (July-Aug 2016). Ms. Holtemeyer worked with NACS and EAR technical leads, data advisor, and country teams to develop a template dataset and a plan for collecting and analyzing sex-disaggregated EAR and NACS data.
- **Onsite technical assistance to DRC** (July-Aug 2016) for their Kinshasa Learning Session. Ms. Holtemeyer conducted three one-hour sessions on gender integration in quality improvement, one on each day of the Kinshasa Learning Session for QI teams, with 35-40 participants. The components of the training included defining gender and related concepts; defining gender analysis; understanding how to develop, analyze, and report on sex-disaggregated data and gender-sensitive indicators; and the importance of identifying and addressing and gender-sensitive program planning.
- **Global Gender Webinar** (Aug 2016). Held the first ASSIST Global Gender Webinar, which will be held quarterly to facilitate discussions across country teams on how to integrate gender in QI. Staff from Botswana and Uganda presented on how they have integrated gender into their QI activities, and answered questions from staff around the world.
- **Supported field teams to integrate gender in FY17 work plans** (Sept 2016).

Activity 5. Promote the use of improvement knowledge

OVERVIEW

The project promotes the use of improvement knowledge by leveraging digital media marketing tools to re-direct users to the project's knowledge portal as well as organizing knowledge-sharing webinars. The project actively markets its knowledge products on Facebook and Twitter. In FY16, we emphasized the creation of more innovative, "share-able" content through ASSIST social media, which includes images in the form of infographics and videos, blogs, listicles, and links. Within ASSIST-supported country programs, we disseminate knowledge products locally through coaching visits, learning sessions, knowledge-sharing events, local websites, and support for the creation of resource repositories in local institutions. During FY16 we continued to send out monthly updates to subscribers of the ASSIST listserv to alert them to new resources on the ASSIST web portal.

KEY ACCOMPLISHMENTS AND RESULTS

- **Promotion of improvement resources through Twitter:** Social media continued to play a pivotal role in promoting improvement resources with an online audience. Through the management of Dr. Massoud, Dr. Faramand, and the ASSIST Twitter handles, we were able to double the messages sent out on these profiles and;
 - **Reach 6,356,171 people** on Twitter and direct 1,884 to our website
 - **Increase engagement by 158.7%** which translates to about 3,223 people
 - **Increase followers by 17.3%** or about 55 new followers per month
- **Participated in a Tweet Chat relay to mark the 16 Days of Activism Against Gender-Based Violence Campaign** (Dec 10, 2015). Participating organizations included The Asia Foundation, URC, World Vision, K4Health, Chemonics, Bayan Global, ACDI/VOCA, Promundo, and WI-HER, LLC. The ASSIST team, in partnership with WI-HER and TRAction, led one hour of the global Tweet Chat, discussed lessons learned to prevent gender based violence in economic strengthening and maternal health programs. **The ASSIST Tweet Chat hour reached more than 18,000 people, while the entire relay reached over 7.8 million people—a 550% increase from last year (1.2 million people).**
- **Participated in Tweet Chat relay to celebrate International Women's Day** (Mar 7, 2016). USAID ASSIST, in partnership with The Asia Foundation, USAID, World Vision, Knowledge for Health (K4Health), Chemonics, and Promundo, held an online Twitter conversation titled "How to Advance Gender Equality in 2016 and Beyond." ASSIST presented, "Using data to visualize gender gaps." **ASSIST's segment reached over 16,000 people.**
- **Email updates.** ASSIST continued to send out project and gender updates to the 1,471 subscribers on our listserv, highlighting recent resources and publications, conferences, and blogs. We also sent out an announcement on the, "Improving Health Care Quality" course

developed by ASSIST on the Global eLearning platform. As a result, we received **985 clicks** redirected to the ASSIST website.

- **Growth in reach of ASSIST Facebook posts:** In FY15, the USAID ASSIST Project Facebook pages had 5,731 likes (July 2015), and the highest reach for a post was 371 views. The ASSIST Facebook page now has 6,249 likes, and the reach of posts surpasses 2,000 views.
- **Rise in Twitter followers and engagement:** Twitter followers have increased from 1,241 followers this time last year to 1,880 as of October 1, 2016. ASSIST has reached these milestones through active engagement in during international conferences (like AIDS 2016), international health days, Tweet Chats, social media campaigns, and more.
- **Reaching new audiences with Medium:** Following digital trends we are now cross-posting blogs on the new blogging site, Medium. We currently have 141 followers on Medium and we posted 6 blogs during Q4. Thirty-four (34) people subscribed to read our blogs.
- **Support for technical webinars:** During FY16, ASSIST staff participated in the following webinars:
 - **Improvement for human resources:** Maina Boucar presented on the Human Resources for Health Improvement Collaborative in Niger for the ICAP Webinar as part of the “Introduction to Quality Improvement” training course (Oct 21, 2015).
 - **QI methods:** As part of the ISQua Education Webinar Series, M. Rashad Massoud led a panel discussion, “Beyond technique--what else do we need to do in order to improve quality of care?” involving Sylvia Sax of the University of Heidelberg, Kedar Mate of IHI, and Jorge Hermida and Nigel Livesley from ASSIST (Dec 10, 2015)
 - **Health professions regulation:** Alyson Smith was invited by the Australian Health Practitioner Regulation Agency (AHPRA), following her visit to the AHPRA National Office during home leave, to present a webinar to its members on “Strengthening the system of health professions regulation in Cambodia” (Dec 10, 2015).
 - **Partnership for HIV-Free Survival:** ASSIST sponsored three PHFS webinars during FY16: 1) One led by speakers from IHI and CCP on cross-country learning and knowledge exchanges (Jan 20, 2016); 2) presentations by Nigel Rollins of WHO and Tin Tin Sint of UNICEF on the new WHO-UNICEF HIV and Infant Feeding Guidelines (May 19, 2016); and 3) presentations by Jane Sebidi of the South African National Department of Health and Peter Benjamin and Idon-Nkhenso Sibuyi of HealthEnabled, to discuss the MomConnect strategy to reduce vertical transmission through the use of mobile phones to connect women directly to the information, resources, and support they need (Aug 10, 2016).
 - **Governance of quality:** Amanda Ottosson and Kedar Mate of IHI led an ISQua webinar, “The Necessary Components to Governing Quality” (March 8, 2016)
 - **Managing knowledge for improvement:** Ms. Marquez, Ms. Fatta, and Dr. Byabagambi presented “Managing Knowledge for Improvement” for the ISQua Fellowship Program webinar series (May 26, 2016).
 - **VMMC CQI webinar:** Dr. Donna Jacobs, Dr. John Byabagambi, and Dr. Joseph Kundy presented in the ASSIST webinar for USG field staff, implementing partners and VMMC program managers, “What’s New in Scaling Up Continuous Quality Improvement for Voluntary Medical Male Circumcision.” The webinar was moderated by Dr. Emmanuel Njeuhmeli of USAID OHA (June 22).
 - **Webinar for PMI:** A webinar was presented by Dr Massoud, Dr. Mirwais Rahimzai, Dr. Prisca Muange, Ms. Tiwonge Moyo, and Mr. Dyson Mwandama on ASSIST malaria results for PMI staff (June 29, 2016).

RESEARCH AND EVALUATION

BACKGROUND

The research and evaluation (R&E) unit of the USAID ASSIST Project provides technical assistance and guidance on country-led research and syntheses of learning across country- and centrally-funded projects on several improvement topics, including the validity of improvement-indicator data, sustainability and institutionalization, spread, and economic analysis. The R&E unit disseminates knowledge generated by these studies through web-published reports, peer-reviewed journal articles,

and presentations at relevant international meetings to encourage wider adoption of improvements methods. The unit also provides training to USAID mission officers on topics such as cost-effectiveness analysis of health interventions.

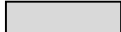
There is a substantive demand for evidence of the effectiveness and efficiency of improvement activities, both within and beyond the countries in which ASSIST is providing support for improvement. The rigor and thoroughness with which the evidence is collected, analyzed, and presented is important for promoting continuation of the activities in ASSIST-supported and other low- and/or middle-income countries (LMICs). The R&E unit works with this principle foremost in mind when designing and executing research and evaluation activities.

In FY16, the R&E unit has been continued to finalize several key studies currently underway and launch new studies, especially on the topic of institutionalization and sustainability of quality improvement beyond the period of external technical assistance. There continues to be a major focus on completing ASSIST's mandates for the control groups, economic analysis of improvement, and data validation.

PROGRAM OVERVIEW

What are we trying to accomplish?	At what scale?
1. Validation of 25% of improvement indicators	
<ul style="list-style-type: none"> Demonstrate that data reported by the ASSIST project are accurate, reliable and relevant 	No less than 25% of total number of country-reported indicators with completed validity assessment
2. Collecting data from control groups for 10% of indicators	
<ul style="list-style-type: none"> Demonstrate the attributable impact of ASSIST interventions on improvement indicators 	Comparison reports on no less than 10% of country-reported indicators
3. Evaluating design of improvement activities for lower- and middle-income countries	
<ul style="list-style-type: none"> Advance learning in improvement science in low- and middle-income countries 	Every ASSIST country program
4. Evaluation of methods and approaches for effective design and implementation of scale-up	
<ul style="list-style-type: none"> Advance global knowledge on scale-up of improvement interventions 	Selected ASSIST country programs with scale-up activities
5. Economic analysis of improvement activities	
<ul style="list-style-type: none"> Advance global learning on comparative advantage and economic efficiency of QI activities 	At least 1 economic analysis (may be basic cost report to full cost-effectiveness analysis) for every ASSIST country with an improvement program
6. Sustaining improvements and institutionalizing the capacity to continuously improve	
<ul style="list-style-type: none"> Contribute to global learning on sustaining and institutionalizing improvement methods to ensure sustainability beyond the life of the project 	At least two studies on sustainability and institutionalization of improvement after direct involvement of the project has ceased
7. Generating learning from multi-country studies	
<ul style="list-style-type: none"> Advance knowledge on improvement interventions and how they work in different settings 	At least one study that either combines or compares and contrasts improvement interventions and their effect in more than one country

What are we trying to accomplish?	At what scale?
8. Capacity building for research and support to country programs	
<ul style="list-style-type: none"> Build research and data management capacity of ASSIST staff 	Every ASSIST country program
9. Disseminate knowledge gained through ASSIST R&E activities	
<ul style="list-style-type: none"> Contribute to the quality improvement and global health fields 	Globally available

 Cross-cutting Activity

As listed in **Table 30**, during FY16, the project had 39 research studies in planning, underway, or completed in 15 countries. Five are multi-country studies.

Table 30: Active USAID ASSIST Project research and evaluation studies (Q1-Q4 FY16)

	Country	Study	Research Area	Status	Program Area
1	Burundi	Factors associated with the involvement of male partners in maternal and child health services in Burundi	Improving care	Completed	HIV
2	Burundi	Evaluation of an improvement collaborative for PMTCT services in Burundi (including data validation)	R&E mandates	Data collection	HIV
3	Cote d'Ivoire	Evaluation of an improvement collaborative for ART and PMTCT services in Cote d'Ivoire (including data validation)	R&E mandates	Protocol drafted, awaiting mission approval	HIV
4	DRC	Baseline evaluation of the quality of HIV services in the Democratic Republic of Congo (DRC)	Design of improvement activities	Analysis and writing	HIV
5	DRC	Validation, control group and economic analysis	R&E mandates	Protocol developed	HIV
6	Ecuador/ Honduras	Ecuador and Honduras institutionalization study	Institutionalization	Planning	MNCH
7	India	Female community health worker familial and social factors that contribute to job engagement	Improving care	2 manuscripts published; 2 others being revised for submission	MNCH
8	India	Cost-effectiveness of RMNCH in India	CEA / improving care	Data analysis underway	MNCH
9	India	Validation of MNCH facility data	Validation	Completed	MNCH

	Country	Study	Research Area	Status	Program Area
10	India	Understanding how QI teams function and the support of USAID ASSIST: An exploratory qualitative study from India	Improving care	Data collection complete; Analysis and writing underway	MNCH
11	Kenya	Validation of QI Team Maturity Index data collected by ASSIST coaches and implementing partner coaches	Validation	Submitted for final review for ASSIST publication	HIV
12	Lesotho	Assessment of validity and reliability of the Partnership for HIV-Free Survival (PHFS) Initiative indicators in Lesotho: A mixed-methods study	Validation	Protocol completed. Data collection planned for July 2016	MNCH
13	Malawi	Evaluating household economic strengthening activities for vulnerable children and families in Malawi	Improving care	Endline data collection completed May 2016; analysis and writing underway	OVC
14	Malawi	Data validation	Validation	Completed	OVC
15	Mali	Evaluation of a people-centered and integrated health services (PCIHS) intervention in Mali	Design of improvement activities/ R&E mandates	Protocol revised. Data collection planned 1 st quarter, FY17	MNCH
16	Mali	Assessing institutionalization of quality improvement Mali: A prospective study	Institutionalization	Planning. Ongoing discussion with Regional and Mali team to finalize study design and scope	MNCH
17	Mali	Validation of improvement indicators in Mali	R&E mandates	Report writing	MNCH
18	South Africa	Effectiveness and efficiency of VMMC improvement	CEA	On hold due to data availability	HIV
19	Swaziland	Validation of new diagnostic technologies for pediatric TB cases	Improving care	Manuscripts prepared / submitted	TB
20	Swaziland	Injection safety, waste management practices and related stigma and discrimination in Swaziland: A national assessment, exploratory study, and evaluation	Improving care	Draft report with OHA for review	HIV

	Country	Study	Research Area	Status	Program Area
21	Swaziland	Screening in maternity to ascertain TB status (SMATS) study in Swaziland	Improving care	Under review – BMC journal, Final reports being drafted	HIV / TB
22	Tanzania	Factors influencing loss to follow-up among PLHIV in Morogoro, Tanzania: The experience from patients who returned to care	Improving care	Finalizing report	HIV
23	Tanzania	A qualitative evaluation of “Assuring Infants and Mothers Get All PMTCT Services” (AIMGAPS)	Design of improvement activities	In review	HIV
24	Tanzania	Data validation	Validation	Completed	HIV
25	Tanzania	Evaluating the effect of improvement approaches for PMTCT	Improving care	Draft protocol	HIV
26	Uganda	The effectiveness and efficiency of applying the chronic care model to clients with HIV in Uganda: A non-randomized controlled evaluation	Design of improvement activities	Completed	HIV
27	Uganda	Improving the quality of safe male circumcision in Uganda: An evaluation and qualitative exploration	Improving care	Manuscript submitted to <i>AJAR</i> in September 2016	HIV
28	Uganda	Integration of family planning into HIV care: A cost-effectiveness analysis	Design of improvement activities	Planning	HIV
29	Uganda	The effectiveness and efficiency of integrated service delivery to HIV-positive mothers and their babies in Uganda	Design and implementation of scale up	Analysis and writing	HIV
30	Uganda	Cost-effectiveness of safe male circumcision knowledge management (SMaCKM) interventions	Design of improvement activities	Analysis and writing underway	HIV
31	Uganda	Assessing the cost-effectiveness of supporting savings groups to improve OVC access to services in Uganda	Design of improvement activities	Concept notes with Uganda mission for review and approval	OVC
32	Uganda	Data validation of ART improvement data	Data validation	Analysis and writing	HIV

	Country	Study	Research Area	Status	Program Area
33	Uganda	Integrating tetanus vaccination into VMMC: Exploring the acceptability, feasibility and cost in Uganda	Design of improvement activities	Analysis and writing underway	HIV
34	Ukraine	Improving alcohol and tobacco control during pregnancy in Ukraine	Design of improvement activities	Completed	MNCH
35	Ukraine	Validation of Brief Physician Intervention (BPI) implementation data	Data validation	Report drafted, under review for ASSIST publication	MNCH
36	Multi-Country Africa	Building partnership: Experiences from the Partnerships in Community Child Protection in Africa	Design of improvement activities	Writing	OVC
37	Multi-country LAC	Evaluation of a web-based Latin American improvement collaborative to prevent neonatal infections in hospitals	Design of improvement activities	Analysis and writing	MNCH
38	Multi-Country	Supporting close-to-community providers through a community health system approach: Case examples from Ethiopia and Tanzania	Design of improvement activities	Completed	Community Health
39	Multi-Country	Survey of improvement methods inclusion in curriculum of medical schools	Institutionalization	Manuscript in review	N/A

Activity 1. Validation of 25% of improvement indicators

OVERVIEW

Improving health and welfare systems is a data-driven process, and its success is contingent on the accuracy and validity of the data used for decision-making. The R&E team is working to ensure the information collected during improvement activities is as accurate and useful as possible in each setting in which ASSIST works. To do so, we are engaged in several research activities that investigate the validity of data collected in the project. Information derived from these studies is directly used to inform improvement activities to facilitate good decision-making among those implementing system changes in ASSIST-supported activities.

KEY ACCOMPLISHMENTS AND RESULTS

- **Developed protocol and tools, pre-tested tools, and conducted validation of data collection for “Evaluation of an improvement collaborative for PMTCT services in Burundi”** (Sept 2016) This study seeks to understand: 1. Are the improvement data reported by ASSIST in Burundi accurate? 2. Do ASSIST sites have better results in terms of quality improvement indicators than non-ASSIST sites? 3. What is the cost-effectiveness of the ASSIST improvement approach compared to business-as-usual?
- **Protocol developed for validation data in DRC** (Sept 2016). Data collection will begin in Q1 FY17.
- **Harvard T.H. Chan School of Public Health Fellow travelled to Botswana and Lesotho to conduct data validation studies** (Aug 2016). Data will be analyzed in Q1 FY17.

- **Completed a report on “Validation of OVC Quality Improvement Team Functionality in Kenya”** and submitted it for internal review (Mar 2016). This study of validated data collected from the QI Team Maturity Index (TMI) by both the ASSIST coaches and the coaches from the implementing partners. It showed that the TMI had utility for implementing partners and guided their activities in supporting community improvement teams but there tended to be an overestimation of performance of the community QI teams by the IP coaches compared to the assessment by the ASSIST coaches.
- **Drafted validation report on the Ukraine Brief Physician Intervention (BPI) implementation** (June 2016). It is currently under review for ASSIST publication.
- **Report writing for Mali data validation activities. Report to be completed in Q1 FY17**

Activity 2. Collecting data from control groups for 10% of indicators

OVERVIEW

Given the dynamic settings in which ASSIST is often operating, the case for attributing changes in outcomes or processes of care delivery is difficult to establish without a valid comparison group. The R&E team works to include controls (non-ASSIST intervention groups) into all activities when it is feasible.

KEY ACCOMPLISHMENTS AND RESULTS

- **Edward Broughton travelled to Kenya and Tanzania to develop methods for the country teams to conduct studies of control groups** (Feb 2016).
- **Evaluation of an improvement collaborative for PMTCT services in Burundi (control group data).** Protocol for study was finalized (March 2016). Currently conducting control group data collection (Sept 2016).
- **Analysis and writing on the Safe Male Circumcision Knowledge Management (SMaCKM) study in Uganda:** ASSIST is working in Uganda to spread the improvement of safe medical circumcision in Uganda using knowledge management methods. This study, which is being conducted in 15 sites in partnership with JHUCCP, is using a three-armed comparison, with sites randomly assigned to one of the following arms: 1) Provision of written materials, 2) Provision of written materials with an in-person handover meeting, 3) Provision of written materials with an in-person handover meeting and three follow-up coaching visits from ASSIST staff. Endline data collection was conducted in Q2, FY16. Data underwent preliminary analysis in Q4, FY16 and will be completed and written up in Q1, FY17. Findings from the qualitative data were:
 - Written materials were viewed as essential resources that could be referenced regularly; however, there were suggestions for improving access by making them less bulky and presenting information in alternative ways.
 - Learning from experienced sites was a valuable aspect of the handover meeting.
 - The practical and individualized nature of coaching visits was highly valued by those who received them.
 - Concerns were raised about how information on new standards and practices, such as tetanus toxoid vaccination, would be disseminated.
 - Participation in all three arms was viewed as positively impacting the quality of VMMC services and professional development.
- **Protocol developed for control group comparison in DRC** (Sept 2016). Data collection in Q1, FY17.
- Control group data were collected in Kenya and analysis is pending (Q4).

Activity 3. Evaluating design of improvement activities

OVERVIEW

ASSIST is constantly seeking to improve the way it provides technical assistance to facilitate better performance in health service delivery. Rigorous quantitative and qualitative evaluation of the design of improvement interventions is key to this process.

KEY ACCOMPLISHMENTS AND RESULTS

- **A new study entitled “Understanding how QI teams function and the support of USAID ASSIST: An exploratory qualitative study from India” was conceived of, designed, and received IRB approval (Q4).** The research questions are: 1) How does a new facility start and carry out their first improvement activity? 2) How do coaches support a facility in their first improvement activity and what means of communication is viewed as the most helpful? Data collection will be conducted in October 2016, and we anticipate finalizing the write-up in December 2016.
- **The protocol and data collection tools for the “Evaluation of a people-centered and integrated health services (PCIHS) intervention in Mali” was developed and revised to include quality of care indicators and more detailed satisfaction questions (Q1-Q4).** Baseline data collection is planned for FY17 Q1.
- **Conducted and completed end line data collection for study evaluating household economic strengthening activities for vulnerable families in Malawi (March - May 2016). Data analysis and report writing underway and will continue in FY17.** In Malawi, ASSIST has been supporting vulnerable children and families through household economic strengthening (HES) activities. The objective of the improvement activity is to increase the proportion of children in households who participate in HES activities who are linked to necessary essential services, encompassing food security, health, education, and HES.

Activity 4. Evaluation of methods and approaches for effective design and implementation of scale-up

OVERVIEW

Increasing the reach of improvement activities to involve a higher proportion of service delivery units is one of the goals of ASSIST. The R&E unit seeks to build the evidence base to determine the most effective and efficient ways to do this.

KEY ACCOMPLISHMENTS AND RESULTS

- **Analysis and writing is ongoing for the study examining factors influencing loss to follow-up (LTFU) among, people with living with HIV/AIDS in Morogoro, Tanzania.** As ASSIST is in the process of scaling up improvement activities for HIV patients in Morogoro, we need to understand why patients are lost to follow-up so that the improvement intervention package can be further enhanced. This cross-sectional study used a combination of qualitative and quantitative approaches to explore factors that lead to treatment discontinuation from the perspectives of people living with HIV, HIV/AIDS group representatives, home-based care providers, care and treatment clinic (CTC) staff, and managers.
- **Prepared a manuscript for a *Study on the effectiveness and efficiency of integrated service delivery to HIV-positive mothers and their babies in Uganda* (Q2).** The manuscript underwent USAID review (Q3). Additional analysis is currently underway. ASSIST worked in 22 facilities across six districts of Uganda to improve retention of mother-baby pairs in care, to attain universal breastfeeding and improved nutrition of mother-baby pairs, and ensure that HIV-exposed infants are protected through ARVs. In 2014, ASSIST-Uganda began spreading the best practices identified in this demonstration phase to an additional 87 facilities across the country. Currently, services for HIV-positive women and their babies tend to be provided at ART clinics and post-natal clinics, requiring mothers to attend both clinics. In an effort to improve retention of mother-baby pairs in care there has been a movement toward merging service delivery so mother-baby pairs can receive care at the same time or strengthening the linkages between post-natal and ART services to ensure mothers and their babies receive the necessary services. The objective of this study is to evaluate these different modes of service delivery among the 87 spread facilities with particular attention to infant feeding and retention into care of mother-baby pairs. The specific research questions for this study are:
 - How do mothers experience and perceive care across the different modes of service delivery (i.e., services provided in ART clinics, post-natal clinics, or clinics where the services are merged)?

- How effective are the different modes of service delivery compared to the current mode of service delivery in terms of initiation on ART if indicated, receiving routine health services and retention in care?
- What is the incremental efficiency of the new modes of service delivery compared to the current mode of service delivery in terms of initiation on ART if indicated, receiving routine health services and retention in care?
- **Finalized “Improving voluntary medical male circumcision standards adherence and post-procedure follow-up in Uganda: A mixed methods study.” Submitted manuscript to AJAR (Sept 2016).**
- **Screening in maternity to ascertain TB status (SMATS) study in Swaziland. Data collection and analysis completed (Q2-Q4). Submitted the protocol for the study to the BMC journal (Q4).**

Activity 5. Economic analysis of improvement activities

OVERVIEW

Determining the cost-effectiveness of improvement interventions guides decisions on what activities to support. The R&E team is actively working to get some economic analysis into at least one of all the country activities. It is also developing greater in-country capacity to perform economic evaluations and the ability to identify and collect appropriate financial data to facilitate these evaluations.

KEY ACCOMPLISHMENTS AND RESULTS

- **Data were collected for economic analysis in Burundi (Sept 2016).**
- **Protocol for economic analysis for DRC developed (Sept 2016).**
- **Conducted analysis and first draft of the results section for the *Cost-effectiveness of safe male circumcision knowledge management (SMaCKM)* (Q4).**
- **The HSPH Fellow conducted data collection and began analysis on the resulting data sets from Botswana (Aug – Sept 2016). This will be completed in FY17 Q1.**
- **Cost-effectiveness component of the *Safe Male Circumcision Knowledge Management Study in Uganda*. Conducted analysis and first draft of the results section for the SMaCKM cost-effectiveness analysis (Q4).**
- **Capacity development and planning for cost data collection was conducted in Kenya and Tanzania. A basic cost analysis was conducted in Malawi (Q1-Q2).**
- **The SMATS study for TB screening had a cost component and data have been collected (Q1-Q3) and preliminary analysis had been completed (Q4).**
- **A perspectives paper entitled “Why Economic Analysis of Health System Improvement Interventions Matters” was authored, submitted by Edward Broughton and Lani Marquez on the issues with conducting economic analysis on improvement activities in the *Frontiers in Public Health* journal. The paper was published on October 11, 2016.**

Activity 6. Sustaining improvements and institutionalizing the capacity to continuously improve

OVERVIEW

ASSIST is planning a study on institutionalization of improvement in Mali. This prospective study will examine the institutionalization of improvement in Mali over time. Facilitators and barriers to improvement will also be examined.

A study is also planned on the development of the quality improvement division within the MOH of Ecuador and Honduras. In Ecuador, although the activities that led to the development of this department occurred under the predecessor USAID Health Care Improvement Project, generating learning from its genesis and the project’s involvement in it is critical for ASSIST. In Honduras, there has been no USAID-supported health care improvement activity in the last three years, and it is of interest to determine what activities are ongoing in this area independent of this support.

KEY ACCOMPLISHMENTS AND RESULTS

- **A concept note was developed to examine the institutionalization of a health care improvement infrastructures that occurred in Honduras and Ecuador since the end of USAID-funded activities several years ago (July 2016).** A literature review was also conducted in Q4 by the Harvard T.H. Chan School of Public Health.

Activity 7. Generating learning from multi-country studies

OVERVIEW

ASSIST seeks to leverage the fact that it is working on the same or similar goals concurrently in several countries, sometimes with similar methods. Learning how improvement works or not in different settings can add significantly to the body of knowledge of health systems strengthening. The studies listed below are two examples of such a multi-country approach.

KEY ACCOMPLISHMENTS AND RESULTS

- **The multi-country study of “Survey of improvement methods inclusion in curriculum of medical schools” in sub-Saharan African medical schools that was completed in Q4 and is awaiting final approval before submission for publication in a peer-reviewed journal.**
- **Analysis and writing for evaluation of a web-based Latin American improvement collaborative to prevent neonatal infections in hospitals is underway.** ASSIST intends to use its years of global experience to increase the implementation of evidence-based practices in the LAC region's hospitals to reduce the incidence of the nearly one million annual newborn infections using proven quality improvement methods and tools. A multi-hospital, multi-country improvement collaborative has been entirely organized and will be completely implemented via internet-based applications, minimizing program costs and increasing the efficiency of the QI approach to reach multiple multi-national MNCH service delivery points. The LAC Region Internet-Based Improvement Collaborative to Reduce the Incidence of Non-NICU Hospital Newborn Infections project (RedINFECC Network) is being implemented with the support of the American people through the USAID projects Applying Science to Strengthen and Improve Health Systems (ASSIST) and the Maternal and Child Survival Program (MCSP). The RedINFECC Collaborative Network is being implemented with collaboration from the Neonatal Alliance for Latin America and the Caribbean, and leveraged database support from the Avedis Donabedian Foundation, Barcelona, Spain. While internet use has grown impressively in recent years in the LAC Region, its use for the purpose of improving health care is virtually non-existent. The RedINFECC Collaborative Network is the first-ever experience in this direction in the MNCH area in the Region. An evaluation of the project is imperative to obtain knowledge about the strategy's implementation, costs, the degree of participation and the effectiveness of the improvement activities to improve processes of care and reduce newborn infections. Interviews were conducted with representatives from 18 improvement teams and a group discussion was held with the coaches who supported them during the collaborative in November 2015. This knowledge will be important to ASSIST, and other programs and organizations in LAC, Africa, Asia, and the Middle East and beyond to strengthen health systems globally for improved outcomes for the patients we are trying to serve. The potential for reduced costs and expanded reach with using the internet for improvement activities is significant.

Activity 8. Capacity building for research and support to country programs

OVERVIEW

There is limited capacity to perform rigorous evaluations of improvement interventions, including economic analysis and qualitative methods in health system strengthening. In FY16, Edward Broughton has been working in collaboration with USAID technical experts from the Economic Development, Education, and Environment (E3) Division of USAID on designing courses on cost-effectiveness analysis in health programs for delivery in other settings.

KEY ACCOMPLISHMENTS AND RESULTS

- **The R&E team has provided support for analyzing and developing manuscripts for publication for the Partnership for HIV-Free Survival work in Kenya (Q4).**
- In FY16, Edward Broughton has been working in collaboration with USAID technical experts from the **Economic Development, Education, and Environment (E3) Division of USAID on designing courses on cost-effectiveness analysis in health programs for delivery in other settings.**
- **Cost-effectiveness analysis trainings: A week-long training was delivered by the ASSIST R&E Director in conjunction with the E3 in Maputo, Mozambique (Nov 16 - 20, 2016). A week-long training was also delivered by the ASSIST R&E Director in conjunction with the E3 in Pretoria, South Africa (Jan 25-29, 2016).** Another CEA course is also planned and prepared for delivery in October 2016 in Crystal City, VA.
- **Simon Hildebeitel travelled to Uganda in February 2016 to review project indicator databases and worked on improvements in data management and dashboards with the ASSIST Uganda team.** He also conducted two training sessions on improving data presentations.

Activity 9. Disseminate knowledge gained through ASSIST R&E activities

OVERVIEW

ASSIST disseminates insights from research and evaluation activities through peer-reviewed publications, conference presentations, and project research reports posted to the ASSIST knowledge portal.

KEY ACCOMPLISHMENTS AND RESULTS

- A manuscript entitled “Improving voluntary medical male circumcision standards adherence and post-procedure follow-up in Uganda: A mixed methods study” was submitted to the *African Journal of AIDS Research* in September 2016.
- A manuscript titled “Why economic analysis of health system improvement interventions matters” was written and submitted to the *Frontiers in Public Health* in September and was accepted for publication.
- The manuscript titled “Cost-effectiveness of implementing the chronic care model for HIV care in Uganda” that was submitted to the *International Journal of Quality in Health Care* was accepted for publication in September 2016
- The manuscript “Strengthening pharmaceutical human resources and improving medicine availability and use in Uganda” was been submitted to *Global Health: Science and Practice*, passed initial screening, and was sent for peer review in September.
- Article published (Mar. 2016). Sarin E, Lunsford SS, Sooden A, Rai S, Livesley N. 2016. Incentives of ASHA workers in two districts in India: Lessons from a qualitative study. *Frontiers in Public Health*.
- A manuscript was submitted in May 2016 to *Frontiers in Public Health* for the improvement activity conducted in Cotopaxi, Ecuador. It was accepted for publication in October 2016.
- Proposals were submitted in February 2016 for oral presentations at the November 2016 Health Systems Research Global Symposium for presentations on Indonesia HAPIE results, on health care improvement methods, and on the results of safe male circumcision studies in Uganda. The Uganda results were presented as an e-poster.
- A proposal on the Tanzania health worker engagement study was submitted February 2016 to the International AIDS Society conference and was presented at the conference in July 2016 in Durban, South Africa.
- Two conference presentation proposals were accepted for presentation at the International Society for Quality in Health Care conference in Tokyo in October on the study of the relationship between improvement and accreditation and the implementation of the universal health coverage system in Indonesia.
- The protocol for the SMATS study for screening during pregnancy was submitted February 2016 to *BMC Infectious Diseases* and is currently under review.

- Findings from the DRC baseline assessment were shared with key national-level stakeholders, including the Mission, Ministry of Health, and implementing partners.

SUSTAINABILITY AND INSTITUTIONALIZATION

- ASSIST is conducting several studies that examine sustainability either directly or indirectly, some of which are described below. The R&E unit also provides support for improving the understanding of research and evaluation and capacity in countries supported by ASSIST. This includes presenting research findings as well as research methods to country Ministry of Health counterparts and other implementing partners. We also often involve MOH stakeholders in the research process directly by asking for their input in protocol development, data collection, and producing the report. This promotes engagement in the activity, which can lead to sustainability of the activities and the overall approach to improving health care. We will be using the Institutionalization Framework, refined under ASSIST, to develop these studies and clarify what elements are necessary or sufficient for continuing improvement in the health system beyond the period of direct assistance. From this, we expect to learn more about the factors needed in a health system to advance service improvement and how to develop these in places that may lack them.
- Economic analysis of improvement interventions plays an important role in determining sustainability of QI in countries once the project ends. By knowing the resources required by the health system to implement and sustain improvement activities independently, decision-makers can make choices about resource allocation with regard to health care improvement using the best available information. ASSIST's R&E unit works to produce this information.

Obstacles and Remedies

OBSTACLES

While the work under ASSIST is proceeding, there remain serious funding issues, in particular the discrepancy between the timing of the funding and the work planning requirements.

From years 1 through 3, ASSIST received \$85,837,002 in obligations. For year 4 (FY16) only, ASSIST has received \$59,156,500 in funding; for year 5 (FY17), ASSIST is expecting an additional \$9 million for Zika and an additional \$49,465,000 for other core- and Mission-funded work. ASSIST would require an extension to complete all agreed upon work plan activities. The timing of the approval for such an extension could have severe consequences on staffing. Strategic staff members needed for the successful implementation and close-out of the project may leave to seek other positions should the approval for an extension past the current project end date of September 2017 not be received before the end of the calendar year.

In conversations regarding Zika work and funding, USAID informed the project team that the Zika funding is for a two-year period. However, since the funds have come via the ASSIST mechanism ending in September 2017, this presents another pressing need for an extension of the ASSIST Project as a whole. The upcoming project end date has also created added difficulty in the start-up of the Zika work, given that some vendors, contractors, and landlords have been reluctant to sign an agreement with a duration of less than 12 months.

REMEDIES

Expediting the approval for an extension for the ASSIST cooperative agreement would remedy the above obstacles, as well as formal communication of this approval of extension to Bureaus and Missions. Delays in the approval of an extension will result in damages to the technical progress of work and will damage relationships with Ministries, partners in country, and project staff.

Analysis and Explanation of Costs

- ASSIST continues to increase spending as a result of the level of FY16 funding received, as indicated above.
- ASSIST could reach \$189,405,021 in obligations for ongoing field support and core-funded work, exceeding the current project ceiling by \$4,420,991. Given this and also the addition of \$24,000,000 in Zika emergency response funding, ASSIST requires an additional \$28,420,991 in funding in order to carry out regular work in addition to the Zika emergency response work.
- In order to not disrupt work that has been requested by USAID Missions, ASSIST needs to continue into FY18 to prevent the disruption of ongoing technical assistance services being provided to host country governments.

Performance Monitoring Plan

Table 31 summarizes progress through FY16 Q1 and Q4 on key indicators in the ASSIST performance monitoring plan.

Table 31. Progress on USAID ASSIST Project performance monitoring indicators, September 30, 2016

#	Indicator	Baseline	End of Project Target	Progress as of September 30, 2016	Data Source/ Collection methods
Project Management					
1	# of Annual Work Plans submitted on-time to the AOR	0	5	4	Transmission of deliverable to the AOR
2	# of Annual Project Reports submitted on-time to the AOR	0	5	3	Transmission of deliverable to the AOR
3	Gender Framework submitted within 90 calendar days of the cooperative agreement effective date	0	1	1	Transmission of deliverable to the AOR
4	# of Annual Research and Evaluation Reports submitted on-time to the AOR	0	5	3	Transmission of deliverable to the AOR
5	# of quarterly financial reports submitted on-time to the AOR	0	20	16	Transmission of deliverable to the AOR
6	# of Semi-annual Performance Monitoring Reports submitted on-time to the AOR	0	10	7	Transmission of deliverable to the AOR
7	Final Report of the cooperative agreement submitted on-time to the AOR	0	1	NA	Transmission of deliverable to the AOR

Documentation and Knowledge Management					
#	Indicator	Baseline	End of Project Target	Progress as of September 30, 2016	Data Source/ Collection methods
1	Knowledge Management Plan submitted within 90 calendar days of the cooperative agreement effective date	0	1	1	Transmission of deliverable to the AOR
2	# of Documentation and Knowledge Management Reports submitted to AOR	0	5	3	Transmission of deliverable to the AOR
3	Design of ASSIST Knowledge Portal submitted to AOR for approval	NA	1	1	Written approval by AOR [Benchmark: completed in year 1]
4	# of country case studies	0	30	38	[Benchmark: 20 completed by the end of year 3]
5	# of research and evaluation studies examining the KM system as a whole or components	0	4	4	[Benchmark: four completed by the end of year three]
6	% of ASSIST country teams with at least one team member with basic competencies in KM and documentation	0	100%	73% (11/15)	Country program quarterly and annual reporting; special surveys
7	% of assisted countries that apply KM approaches to conduct synthesis and knowledge harvesting exercise each year	7% (1/14)	100%	80% (12/15)	Country program quarterly and annual reporting; special surveys
8	Average # of knowledge products developed per country	0.6 (9/14) (FY13)	3	$(9 + 29 + 24 + 21) = 83/21 = 4.0$	Country program quarterly and annual reporting
9	% of assisted countries with local repository of improvement knowledge	0%	Baseline + 25%	19% (4/21)	Country program quarterly and annual reporting
10	# of communities of practice supported on the ASSIST knowledge portal	0	3	3	HQ quarterly and annual reporting
11	# of virtual learning events supported by the ASSIST KM system	0	3	$4 + 19 + 9 = 32$	HQ quarterly and annual reporting

Global Technical Leadership					
#	Indicator	Baseline	Target	Progress	Data Source/ Collection methods
1	# of articles on improvement methods and results published in peer-reviewed journals; possible topics to be addressed include application of improvement approaches to new areas, major technical issues in the field of improvement, gender integration as an improvement strategy, results of KM activities	NA	10	4 + 8 + 7 = 19	Publication
2	# of assisted countries with national health care improvement policies and strategies	3	Baseline + 5	7	Country program quarterly and annual reporting
3	# presentations given by ASSIST staff at global health technical conferences	NA	25	183	HQ and country quarterly and annual reporting
Field Operations					
#	Indicator	Baseline	Target	Progress	Data Source/ Collection methods
1	% of integrated country design plans signed by country and USAID stakeholders	NA	100%	88% (14/16)	Country Improvement Plan signed
2	% of annual country reports submitted on-time	NA	100%	FY13: 100% (7/7) FY14: 100% (19/19) FY 15: 100% (20/20)	Dates of submission of annual country reports to AOR
3	% of annual country reports that examine magnitude and spread rate of improvement	NA	100%	100%	Review of annual country reports
4	% of country-reported indicators externally validated	NA	25% of reported indicators	26% (121/465) in process 16%	Country quarterly and annual reporting

				(74/465) completed.	
5	% of improvement indicators tracked with a QI and non-QI intervention comparison groups	NA	10% of reported indicators	16% (75/465 indicators) in process 6% (30/465) completed	Country quarterly and annual reporting
6	% of countries collecting and analyzing sex-disaggregated data for improvement when relevant	86% (6/7) (FY13)	100%	64% (9/14)	Country quarterly and annual reporting
7	% of country programs tracking expenditures for the purpose of economic evaluation (integrated into the country plan)	0	80%	35% (7/20)	Accounting records
8	% of integrated country design plans that address relevant gender-related barriers	43% (3/7)	30%	93% (14/15)	Review of integrated country design plans, review of project planning

NA = Not applicable (deliverable not yet due)

**USAID APPLYING SCIENCE TO STRENGTHEN
AND IMPROVE SYSTEMS PROJECT**

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